Significant Bits

Brisbug

November 1992

In this issue...

NOTE! -- The December meeting will be on the **2nd Sunday of the month.** (November's is on the 3rd Sunday as normal.)

Meeting: Sunday 15 November 1992

10am -- 5pm

Bardon Professional Centre

Simpsons Road, Bardon, Brisbane

Lunchtime Special (12:00)

Demonstration of latest update to OS/2 v2

Main event (1:30) in the theatre:

Presentation by Microsoft of new releases:

Access

Windows Sound System

Windows for Workgroups

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.

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

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Software Library & Shop

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, or by modem to Brisbug BBS
("Stack Overflow" file area) or direct to the editor on
(07) **379-1732** at any time. (*NOTE: New number*)
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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 drive-ways**, 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.
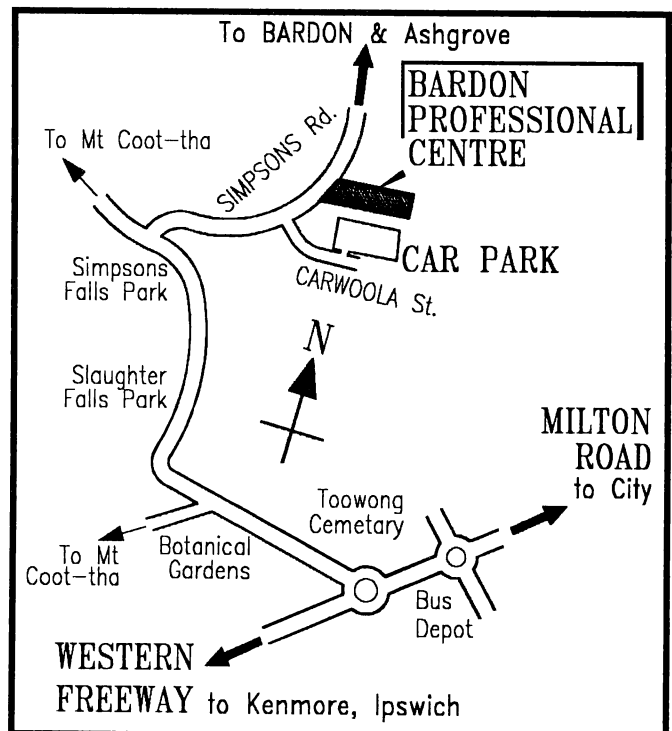
From the Engine Room

An article later in this issue - *"Junior Club Future Uncertain"* - emphasises one of the major problems of running a club as successful as Brisbug. Great ideas, such as JSIG, take off quickly, placing great strain on the workers who give generously of their time to make them reality. In this case, the unavoidable absence of two of the volunteers on work commitments has placed the future of JSIG in doubt unless we are able to find more people willing to give back something to their hobby.

Like other great (I can use this description because it was not *mine*) ideas, it has also spawned a spin-off. Specifically, a number of parents are taking the opportunity to sit in with their kids and get hands-on experience with their PC in an informal atmosphere. If we can get some tutors to volunteer, we'll make this a permanent feature, either in class time in the mornings, or SIG time in the afternoons. You do not need to be an expert to tutor. Most of the parents in this group are new to computing and would enjoy some gentle help.

On the question of workers, the Annual General Meeting and election of officers is nearly here (January actually), and there is plenty of room for you to participate in running Brisbug. As I like to point out, the committee is only a small proportion (about 20%) of the workers for Brisbug. Even if you don't want the formality of committee meetings etc, the committee members, including me, have teams of advisers and "doers" helping them. *(Darn ... now I've dispelled the notions of presidential omniscience).* So here's your chance to get involved.

Think about it, please.

From The Editor..

Newcomers to PCs

Many PCs are now being supplied with "bundled" software. This is usually quite a bargain, but can be a trap for newcomers. Sometimes the software is selected more as a result of promotional drives than practicality. I know an instance of PCs being supplied with Norton Desktop for Windows but without Windows!

At BRISBUG we always give prime attention to helping newcomers to computing. There have been several articles in these pages with that objective, apart from the continuing classes on the Sundays. We intend to publish some advice for new owners of both DOS and Windows machines, now that PCs are often sold with Windows.

For the moment, here is my advice to new users:

Master the basics of the system first. Don't confuse yourself with enhancements and add-ons until you are conversant with the basics. Add-ons are often promoted as making the system easier to use, but, particularly with Windows enhancements, I have found they more often confuse people. What's worse, they quite often introduce conflicts and unreliablility.

In the case of systems setup with Windows as the prime operating mode, I don't mean they need to begin by mastering DOS, but they should learn all the built-in Windows facilities before adding any desktop enhancements, file manager substitutes, add-on screen savers, etc. People rush off spending more money on very

elaborate word processors (or stealing them!), when the built-in Write may do all they need to begin with. Come to grips with the basics first.

New modem number

All you contributors to Sig Bits -- please note that my modem number has changed. It is now available at most times day and night, and can accept calls up to 9600 baud. It is automatically sharing a line with my FAX. The number is (07) 379-1732.

Christmas is a'comming..

We always have a problem at the end of the year. Firstly, the post gets even slower than normal (yes, it IS possible!); and secondly, all the printing trades go on holidays right after Christmas. Last year, we produced two issues of Significant Bits for December, and held one of them to post in January. It was a major pain. This year, we have decided not to produce a January issue. Hopefully we will get enough material to make the December issue a thick one to compensate. (Hint, hint!)

The December meeting will be on the 2nd Sunday of the month -- NOTE THAT PLEASE!

So it may prove a bit hard, because we will also have to produce the December issue a week earlier than usual, or more. On top of that, the post will probably be slower. It shouldn't get really bogged down with the Christmas rush until about the 7th, but you never know, especially as the post has been getting generally much slower lately.

Since the Dec meeting is a week early, we really need to ensure members get the magazine as a reminder. We'll do our best (as usual), but please write yourselves a BIG NOTE about the meeting on Dec 13th. ...And help us fill a bumper Christmas-New Year issue by sending a contribution, early.
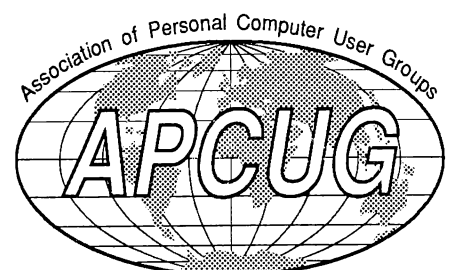
— Cheers, Geoff

PRELIMINARY NOTICE

Annual General Meeting and Election of Office Bearers

Sunday, January 17th, 1993 at 1:30pm

Nomination and Proxy Voting forms will be published in the Xmas Holidays issue of "Significant Bits", or are available on request from the General Secretary

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Windows for Workgroups

Windows for Workgroups is the name of Microsoft's new network system for small to medium sized operations. This document was supplied to us by Microsoft .

This document is written as an introduction to Windows for Workgroups with the following objectives:

- *Product overview*

- *Feature and benefits*

- *Inter-operability*

- *Configurability*

- *Pricing*

Also described is a related product, the Workgroup Upgrades for MS DOS.

Product Description

Microsoft Windows for Workgroups is a new version of Windows 3.1, based on Windows 3.1, which will provide information sharing, communication and workgroup application capabilities to Windows users.

Includes Windows 3.1.

Windows for Workgroups includes Windows 3.1, and therefore inherits all the capabilities, features, and applets of Windows 3.1 and runs all Windows 3.0 and 3.1 applications. WINDOWS FOR WORKGROUP's new features are described below. For current users of Windows 3.1 there is an "Upgrade" vers in of Windows for Workgroups at a lower price that just adds the new features.

File sharing. Windows for Workgroups users can share files on the hard disks of their PCs with other users. Once a directory is "shared", all files in that directory and all subdirectories are accessible by other users, pending the security permissions the user has set up. Users "share" directories from the File Manager.

Printer sharing. Windows for Workgroups users can share printers attached to their PCs for use by other users. Once "shared" other users can send print jobs to that printer. Users "share" printers from the Print Manager.

Accessing and using shared files and printers. Windows for Workgroups users can connect to shared directories or printers. Once connected users can access files in shared directories. The files can be copied, read, executed, or modified depending on security permissions set by the user when he or she shared it. Similarly, once connected to a shared printer attached to another PC, users can send print jobs that printer. Connecting and managing the access of shared directories and printers takes place through the File Manager and Print Manager.

Access to shared directories and printers is also available to DOS applications running under Windows or at the DOS prompt in a DOS box under Windows.

Graphical user interface (GUI) for managing network operations. All network operations (sharing a directory or printer, connecting to a shared directory or printer, sending electronic mail, scheduling group meetings, etc.) are executed through the Windows graphical interface. In particular all directory and file operations are conducted in the File Manager, and all printer operations in the Print Manager. File and Print Manager have been enhanced to include a Tool Bar that has icons for commonly used commands and network operations like sharing and connecting. All connecting to shared files and printers can be done with point and click operations.

GUI setup and configuration for network hardware and software. Windows for Workgroups setup program will at-

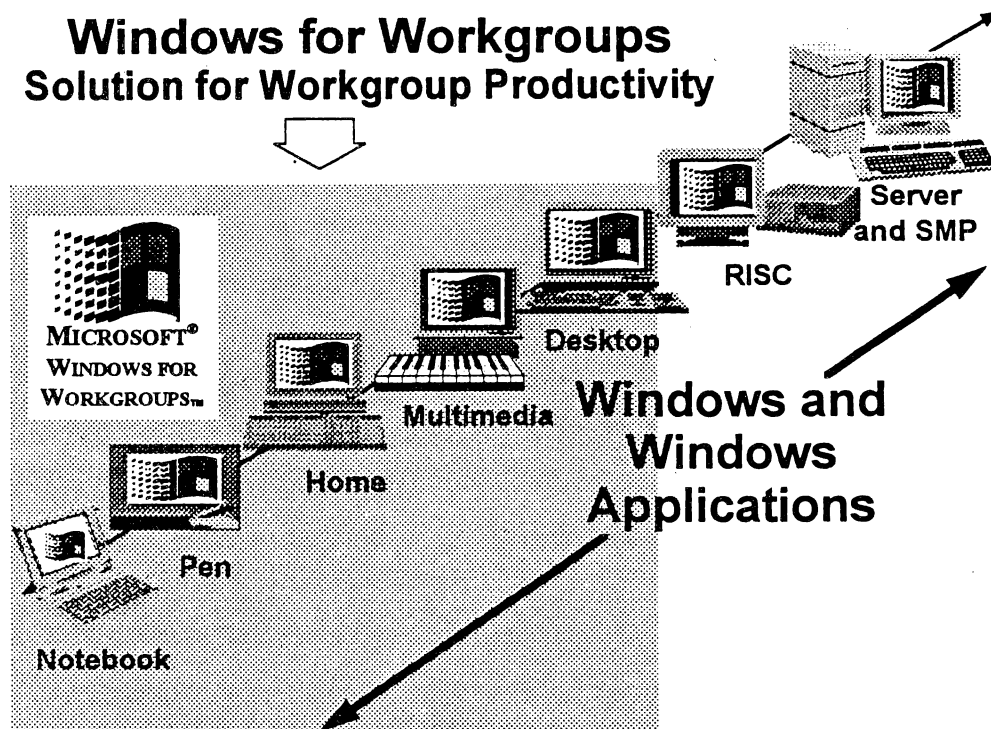**Windows for Workgroups Solution for Workgroup Productivity**

MICROSOFT®
WINDOWS FOR
WORKGROUPS™

Notebook

Pen

Home

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Desktop

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Server and SMP

Windows and Windows Applications

tempt to detect the installed network card at setup and present the user with intelligent defaults for network card settings. The Windows for Workgroups Network Starter Kit, which includes network cards, will automatically detect and configure the network card at setup automatically.

Windows for Workgroups setup will configure the user to run with access to multiple networks simultaneously. There is also a Control Panel applet which allows users to install and configure network transports and network card drivers.

Network DDE and Clipboard Viewer. The Dynamic Data Exchange (DDE) protocol is extended to work over the Windows for Workgroups network. This allows users to share DDE items across the network and other users to "connect" to them to create live links between documents on different PCs. The Clipbook Viewer (extended version of the Clipboard) is an application that allows users to share DDE items (parts of a file, for example a cell range in an Excel spreadsheet) and connect to shared DDE items over the network . Once users connect to a Windows for Workgroups user's Clipbook, any shared DDE item in that Clipbook can be copied into the users local Clipboard and then can be pasted into any application (that supports DDE) to create "live" links across the network. When data is linked in this fashion changes to the original data are automatically propagated to the linked items on other PCs. This feature requires no changes to existing applications that support DDE

Email. MS Mail 3.0, a full featured electronic mail application, is included and integrated into Windows for Workgroups. MS Mail 3.0 allows users to read, compose, forward and reply to electronic mail messages, as well as to manage messages they have received. Received messages can be ordered by Sender, Date Received or Subject, or can be stored in folders created and named by the user. MS Mail 3.0 features a "point and click" address book that makes it easy to address email messages. Messages can have file attachments or include OLE objects. Users can easily attach files to messages by selecting the file in the File Manager and using the "Send Mail" Tool Bar icon. This opens the email compose window with the selected file attached to a new message ready to be addressed.

Windows for Workgroups comes with all the features necessary to send electronic mail to other members of the Windows for Workgroups workgroup who use the same Workgroup Post office (one of the PCs in the workgroup running Windows for Workgroups acts as the Workgroup Post Office). Windows for Workgroups will automatically set up a Workgroup Post Office if one does not exist, and will also allow users to add their accounts to the Post Office the first time they want to send mail. To send electronic mail to multiple post offices, or via email gateways (available separately from Microsoft), an upgrade to the Workgroup Post Office is required. This upgrade is sold separately at a nominal fee.

Scheduling. The Schedule + application is included and integrated into Windows for Workgroups. This is a full featured graphical scheduling application that allows users to schedule group meetings, and manage their daily calendar and task list electronically. Users keep their calendars and task lists by adding meetings and tasks with drop and drag operations. Several views allow users to view and print out their appointments by day, week, month. Similarly tasks can be arranged by project, priority, and due date.

To schedule meetings with other Windows for Workgroups workgroup members, users access the address book (same as from email application) and add desired members to the attendees list. Schedule + looks up the free and busy information for each member on the attendee list and fills in a calendar view with the free and busy information for the user and all requested attendees. This allows the user to find a common free time for all attendees. Then the user can request a meeting which will send an email request to each member of the attendees list asking for confirmation to meet at the requested time. Attendees can accept, reject or tentatively accept the meeting request. If accepted these meetings get added to the calendars of the users and an acceptance (or rejection) email is sent to the meeting requester.

Schedule + stores information at the Workgroup Post Office. The Windows for Workgroups setup program automatically configures the Workgroup Post Office to handle the calendar information.

Easy to Scale

• **Add LAN Manager or Netware servers as necessary**

• **PC Mail servers can be added and mail gateways can connect the workgroup to host-based mail systems**

• **SQL Server etc can be added as required**

WFW

WFW

WFW

WFW

WFW

Win NT

LANMan 2.1

PC Mail Server

Host-based Services
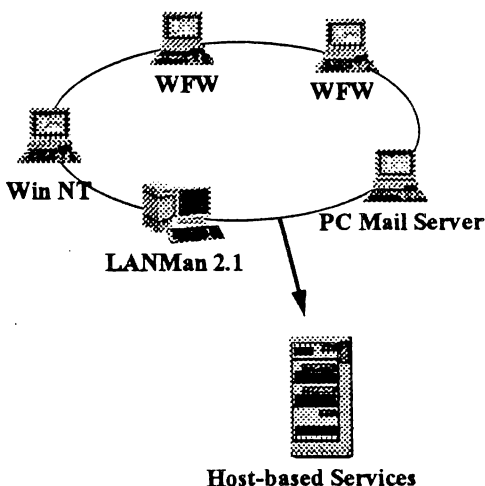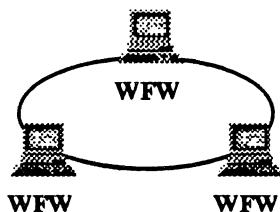
Security. Windows for Workgroups allows users to password protect their shared directories, printers and DDE items. The access controls allowed are "Read Only" and "Full Access". When creating a shared directory (or printer, etc.) users specify which of these access controls apply to the shared item. The user can also choose to apply a password which a connecting user must submit to gain the requested access. The user can choose to allow both "Read Only" and "Full Access" for a given shared item, and specify different passwords to each access control. Then, users that

Enterprise Connectivity Options
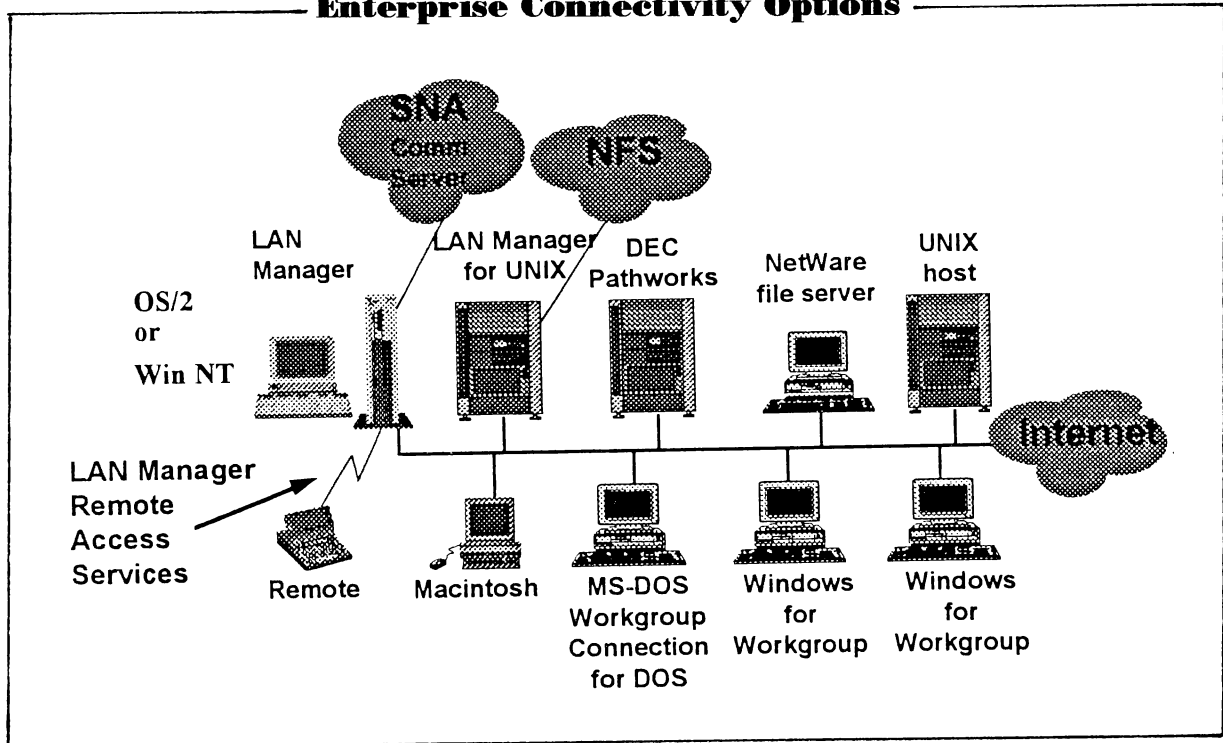
gain access with the "Read Only Access password" only get read access, and those that gain access with the "Full Access password", get full access (i.e. read, write, delete, modify, etc.). Access controls and passwords are specified per shared item, not user. Any user with the correct password can gain access to a shared item. The default access control for all shared items is "Read Only" with no password. Access controls and passwords are set by the user when the item is "shared".

Auto-reconnect/reshare and password memory.

When connecting to shared items, or sharing items, users can choose to automatically reconnect or reshare those items at start-up. When Windows for Workgroups is restarted it automatically attempts to reconnect or reshare all items so designated.

Each time a reconnection is made to a shared item set with a password, the user must provide the correct password to complete reconnection successfully. The first time a user supplies a password for a shared item, Windows for Workgroups records that share and password in an encrypted file on the user's local disk. When an attempt is made to reconnect to that share, Windows for Workgroups uses the password in the encrypted file. If the password is still valid (i.e. the sharing user hasn't changed the password), Windows for Workgroups will automatically reconnect without prompting the user for

a password, thereby "remembering" passwords. Password memory cuts down on the number of times a user will be prompted for a password during the reconnection process.

The encrypted file with the passwords is "unlocked" by the user login name, meaning that a foreign user cannot "use" the password file unless they have the correct user name/password pair.

WinMeter.
WinMeter is an applet included with Windows for Workgroups that enables users to see what percent of the CPU utilization on their PCs is being used for their own local applications, and what percent is being utilized to service requests of other Windows for Workgroups users (i.e. users connecting to that PC for file, printer or other access). WinMeter sits on the Windows for Workgroups desktop and shows a colorful graph indicating the CPU resource usage.

Network applet in Control Panel.
The network applet in Control Panel has been enhanced with the following capabilities:

- Ability for the user to log on and off the Windows for Workgroups network and change password.

- Ability to set and configure parameters for network card settings and network protocols.

- Performance slide bar to optimize CPU utilization. Setting slide bar to one side

prioritizes local applications, thereby maximizing the performance of the user's local applications. Setting the slide bar to the other side maximizes response to other users' requests (file, print, etc.), thereby slowing down local applications when requests come in. Settings in between allow the user to compromise between local and remote performance.

NetWatcher applet.
The NetWatcher applet allows users to see who is currently connected to their PC, and what directories, and what files they have open. Also, users can disconnect users with NetWatcher, and view their length of connection and idle time. NetWatcher can also be set up to log user connections over time and record them for future reference.

Chat.
A chat application for real time 1-1 messaging over the network is included. This graphical application allows users to "dial" and connect to other Windows for Workgroups users. Once connected, both parties can simultaneously type into windows on each other's screen carrying on a 2 way real time conversation.

Interoperability (LAN Manager).
Windows for Workgroups is interoperable with Microsoft LAN Manager and future Windows NT server products. Windows for Workgroups PCs PCs are clients for LAN Manager servers, meaning they can access LAN Manager servers without any

additional software, and LAN Manager clients can access Windows for Workgroups PCs. This interoperability is enabled because Windows for Workgroups uses the same networking protocols, NetBEUI and SMBs, as LAN Manager (and eventually Windows NT). Windows for Workgroups also supports all LAN Manager APIs, including client-side named pipes, and Windows for Workgroups users can log into LAN Manager servers and have their LAN Manager log-in scripts executed properly, as long as their Windows for Workgroups user name and password correspond to their LAN Manager server user name and password.

Co-existence with server networks (NetWare).
Windows for Workgroups can co-exist with server networks based on Novell NetWare. This means that Windows for Workgroups users can simultaneously access Windows for Workgroups PCs, as well as NetWare servers over the same network card and cable. This is done via the "dual redirector" technology which allows multiple networking protocols to be run over he same network card and cable.

Windows for Workgroups will also ship with the NetWare client software in the box (Novell code, same as in Windows 3.1), and the Windows for Workgroups setup program will install the NetWare client software on a "virgin" machine (not currently a NetWare client) as an installation option. NetWare clients cannot connect to Windows for Workgroups PCs, just NetWare servers on the same physical network.

Windows standard mode support.
Windows for Workgroups can run in standard mode, like Windows 3.1, on 386 or 286 machines. When running in standard mode Windows for Workgroups users cannot share directories, printers or DDE items, but can connect to and use shared items on other PCs.

Games.
Windows for Workgroups will include a graphical version of the card game Hearts which enables users to play other Windows for Workgroups users over the network.

Product Requirements

Windows for Workgroups requires a cabling solution.
Windows for Workgroups is a networking product, and as such requires a physical network to connect the workgroup PCs. Windows for Workgroups supports network cabling solutions of all types by adhering to the NDIS standard. NDIS is an industry wide standard that specifies how a network card (and network transport) must be designed so it works with Windows for Workgroups. NDIS has been widely accepted and there are network card adapters of every type, from every major manufacturer, that support the standard. Windows for Workgroups will ship will a large number of NDIS drivers, and the full set will be available on the Windows Driver Library.

In practice this means that the customer may purchase any of the popular net cards like Twisted Pair EtherNet, Coax EtherNet, Thick EtherNet, and the cabling schemes that go with them, or the various cabling types supported with Token Ring and ArcNet, for the wiring of a Windows for Workgroups network. Of course if a network cabling solution is installed, Windows for Workgroups can be set up to use it, as long as the network adapter cards in the Windows for Workgroups PCs have NDIS drivers available for them.

Network transport protocol support.
Windows for Workgroups will run with any NDIS compatible transport. By default it installs a protect mode version of NETBEUI (interoperable with LAN Manager NETBEUI) as its standard network transport protocol, but any real mode NDIS transport, such as LAN Manager TCP/IP, will be fully compatible. Other real mode NDIS compatible transports are available from third parties and after installation can be configured with the Network Control Panel applet.

Hardware requirements.
Windows for Workgroups will require a 386SX or better, with 4 MB of RAM and 10M of hard disk space running Windows in enhanced mode in order for the user to share files and printers. Running in standard mode requires 2MB of RAM and allows users to connect and use shared items, but not share them.

Memory consumption.
The network components of the Windows for Workgroups run in Windows protect mode memory (above 1 MB), thereby leaving a small footprint in DOS memory (typically less than 20K below 640K in the default configuration with protect mode NETBEUI).

Performance. Windows for Workgroups is designed for small to moderately sized work group networks (50 users or less) with moderate network traffic load.

Workgroup Upgrades for MS-DOS Product Description

The Workgroup Upgrades for MS-DOS product gives DOS users access to Windows for Workgroup PCs. It allows DOS users to access shared files and printers on Windows for Workgroups networks. Some features of the Workgroup Upgrades for MS DOS product include:

Email. Workgroup Upgrades for MS DOS includes an electronic mail application that allows users to send and receive electronic mail with Windows for Workgroups email users.

Ease of installation. Installer modeled after MS-DOS 5.0 installer (i.e., very few questions; DOS 5.0 SETUP look and feel) including net card detection, network parameter setting and easy-to-use over-the-net installation

Ease of use. Directory and file reductions to reduce complexity. Startup and resident RAM reductions to improve environment for applications and maximize RAM available.

Requirements.

- Workgroup Upgrades for MS DOS users' PCs must be physically connected to the Windows for Workgroups network. The same network adapter card and network transport requirements (NDIS compatibility) apply to Workgroup Upgrades for MS DOS as Windows for Workgroups.

- At least 640K of RAM.

Finding the right version for you

Because no two computers and no two workgroups are exactly the same, Microsoft Windows for Workgroups comes in many configurations to meet your specific needs. They are listed on the next page. As your business or workgroup requirements grow, you can choose a different Windows for Workgroups product that works best for you at each stage.

Windows for Workgroups -- Product options and pricing

1. Full Windows for Workgroups for machines without Windows 3.1

A: If you are not networked today and have not yet purchased Windows, and..

(i) You want to immediately connect two PCs, choose the Windows for Workgroups Starter Kit $1400

The complete hardware and software to connect two PCs:

+ Microsoft Windows for Workgroups with Windows 3.1 and all the workgroup functions:
  - Mail
  - Schedule+
  - Peer-to-peer file & printer sharing
  - Utilities: Chat, WinMeter, NetWatcher ...
  - Network dynamic data exchange
+ Read Me First card and Watch Me Second videotape that walk you through easy installation
+ A screwdriver to aid in installation
+ Ethernet network adapter cards
+ Cabling, connectors, and terminators

(ii) You want to add more people to your Windows for Workgroups Starter Kit network, choose the Windows for Workgroups User Kit $700

The software and hardware to add one person to your Starter Kit network:

+ All of the Windows for Workgroups software
+ Cabling and connector
+ Ethernet network adapter card

B: If you are already connected to a LAN, and...

(i) You have MS-DOS version 3.3 or later, choose Microsoft Windows for Workgroups. $390

Includes: Windows for Workgroups including Microsoft Windows version 3.1 and all of the workgroup functions:

+ Mail
+ Schedule+
+ Peer-to-peer file & printer sharing
+ Utilities: Chat, WinMeter, NetWatcher ...
+ Network dynamic data exchange

2. Windows for Workgroups Upgrades for existing Windows 3.1 users

A: If you already own Windows 3.1 and are not networked today, and...

(i) You want to immediately connect two PCs, choose the Windows for Workgroups Add-on Starter Kit $960

Includes: The hardware and software to connect two PC minus Windows 3.1.:

+ Windows for Workgroups workgroup functions:
  - Mail
  - Schedule+
  - Peer-to-peer file & printer sharing
  - Utilities: Chat, WinMeter, NetWatcher ...
  - Network dynamic data exchange
+ Read Me First card and Watch Me Second videotape that walk you through easy installation
+ A screwdriver to aid in installation
+ Ethernet network adapter cards
+ Cabling, connectors, and terminators

(ii) You want to add more people to your Windows for Workgroups Starter Kit network, choose the Windows for Workgroups Add-on User Kit $490

Includes: The software and hardware to add one person to your Starter Kit network; all of the WFW software except Windows 3.1.:

+ WFW workgroup functions:
  - Mail
  - Schedule+
  - Peer-to-peer file & printer sharing
  - Utilities: Chat, WinMeter, NetWatcher ...
  - Network dynamic data exchange
+ Ethernet network adapter card
+ Cabling and connector

B: If you have Windows 3.1 and are already connected to a LAN:

Choose the Windows for Workgroups Add-on. $185

Includes: All of the workgroup functions, without Microsoft Windows version 3.1:

+ Mail
+ Schedule+
+ Peer-to-peer file & printer sharing
+ Utilities: Chat, WinMeter, NetWatcher ...
+ Network dynamic data exchange

3. Non Windows DOS Connectivity Upgrade

If you are running a machine that does not meet the Windows for Workgroups system requirements and want to access your Windows for Workgroups network, choose the Workgroup Connection $155

Software that lets you connect to Windows for Workgroups-based machines from MS-DOS-based machines. You can send and receive electronic mail as well as access shared files and printers while running MS-DOS.

4. Mail Server Upgrade

If you want to expand your network across town or across the globe: Choose the Microsoft Mail and Schedule+ Extension to Windows for Workgroups $790

Includes: Extensions to Mail and Schedule+ that let you:

+ Connect electronic mail and scheduling functions across multiple workgroups
+ Connect Mail to other electronic mail systems
+ Add remote dial-in capabilities to Mail

Font Fever

Geoff Harrod

All about typefaces and fonts, a bit of the history of how they developed on desktop computers, and some advice on how to avoid getting so carried away with the new found facilities that they take over the whole machine.

Windows justifies itself for me, if for no other reason, by the superb facilities it provides for printing. With DOS each program has to provide its own printing and font arrangements. Usually they all do it differently and to varying degrees of capability.

Mostly, all you get is what is built into the printer. Sometimes programs support downloading fonts but usually each program needs its own set of font files if so, and they differ in how the fonts are selected and how many options you get. With Windows, the operating system organises the printer, and whatever facilities can be provided are automatically accessible by all Windows programs.

Also, since Windows is a graphic based system, it can generally provide almost unlimited font facilities as long as the printer can print raster graphics. So the possibility exists to provide the same set of fonts on quite humble printers as on a laser, just with lower quality, slower and noisier. Most DOS programs other than graphic programs are only organised to send character codes to the printer.

At one time, the only choices for a variety of fonts were (1) downloaded bitmap fonts on disk; (2) bitmap fonts on cartridge ROMs in the printer; (3) a Postscript printer. Postscript laser printers were far and away the best but very expensive.

Both the bitmap options had the disadvantage that every font size, weight, and style (Italic or Roman) needed its own complete alphabet of bitmaps. All those bitmaps added up to a lot of memory or disk space, even just for one typeface in all its sizes and varieties.

Postscript

Postscript uses a single outline definition file for each typeface, and scales them to generate any size you want at the time of printing. Generally each font has a normal, italic, bold and bold italic outline definition. Postscript normally needs a laser printer with 2 Mb memory or more and its own powerful computer chip with the Postscript processing program in ROM. The output to the printer has to be in the form of a program script rather than a conventional stream of characters.

Postscript uses a single outline definition file for each typeface, and scales them to generate any size you want at the time of printing.

There are some software Postscript processor programs to run in the PC and generate a graphic raster output to a laser such as an HP Laserjet or to a 24-pin printer. They are generally slow however, and are a bit awkward, as they need a Postscript print file to be generated from the program you are using, and then they read that print file and reprocess it as a printer raster graphic stream.

More recently, systems have been developed that use scalable outline fonts like Postscript, and operate as a resident printer driver to intercept the program's printer output and generate the font bitmaps required on the fly, and either download them to the printer if it supports that, or else send them as a graphic stream. These were pioneered I think by Bitstream, one of the leaders in the modern field of digital typeface production. Others followed, and Adobe, the owners of the Postscript process, produced their own, called Adobe Type Manager, or ATM.

The field of commercial typeface production has always been one of fiercely protected copyrighted designs, even from the days of hot metal type. The major hot metal type founders made the transition to digital photo-typesetting with their copyrights intact, and this gives rise to the copyrighted font names. Various rival companies produce virtually identical looking fonts of the time honoured "standard" typefaces, but have to call them by differing names. It becomes quite confusing. The names used by Adobe for Postscript and ATM are generally the industry "standard" names, and anyone else has to devise other names.

Type managers

These scalable font "Type Managers", such as Bitstream's Facelift, first appeared on PCs in the DOS environment, and always had to be installed and attached to individual programs. Sometimes you could install a different version of the type manager "engine" on several programs and have them use a common set of font files but more often you needed a duplicate set of everything for each application. So you might buy Facelift for WordPerfect, but

could not use its facilities except from WordPerfect.

Beginning with Windows version 3.0, it became possible to buy one copy of Adobe Type Manager and have it useable from all Windows programs. It comes with a rather meagre selection of fonts though, and extra fonts are quite expensive, as is usual with Adobe Postscript. ATM became quite rapidly established through being bundled with certain programs such as Aldus PageMaker 4.0, but its uniqueness was soon to be challenged.

TrueType

When Windows 3.1 arrived, it came with its own Type Manager built in -- TrueType. This really established scalable font technology as the standard,both on screen and in print, and soon quite low cost extra fonts became available for TrueType. Similar facilities were provided in OS/2's Presentation manager, but since IBM and Microsoft's split-up, IBM have adopted Adobe's ATM as the standard I believe.

The TrueType technology is actually a bit more advanced than Postscript or ATM, as its outline definitions can incorporate more precise instructions as to how the font shape should be modified at different point sizes to optimise its appearance and readability. It also has a more complex set of techniques from which it can choose to best work with printers and screens of varying capability.

Fonts in MacWonderland

Interestingly, TrueType was in effect jointly developed by Apple and Microsoft. The original Mac used the idea of having an identical raster pattern on the screen and its ImageWriter dot matrix printer. The QuickDraw rendering engine worked equally on both screen and printer, ensuring true WYSIWYG. (What-You-See-Is-What-You-Get) But it was only 72 dots/inch on the printer, and the Mac only looked so good because the screen was so small! The Mac took off for DTP and graphics use because it provided the facilities needed while the PC was still struggling. (Windows was not very satisfactory until version 3.0.)

The ImageWriter was quite hopeless for professional work of course. Apple served the need by licensing Postscript from Adobe and making the Mac convert its QuickDraw screen images to Postscript for printing, which lessened the accuracy of WYSIWYG quite a bit. With the pas-

Stroked & filled outline font.
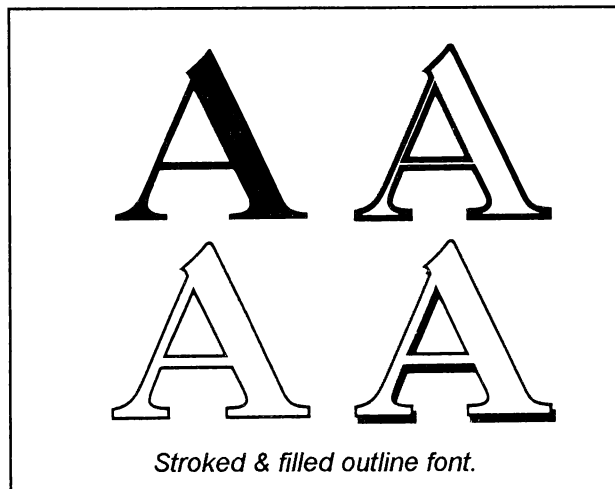
sage of time, the Mac's screen became acknowledged as too small for the job and not really sharp enough, and the PC, with VGA and Windows, was by then doing a better job. However the Mac had more of that sort of software and had the established user base.

The Mac-II with its separate (superb) colour monitor addressed the situation, and needed a better font system. Apple developed their own font outline scaler (called Royal) as an extension of QuickDraw, partly to be able to cut their licensing costs (Adobe were rather dear), and partly to put outline font technology on the new larger screens and get back to true WYSIWYG operation.

Meanwhile, Back in the PC Camp...

At the same time, Microsoft were working on something similar for their OS/2. In 1989 they exchanged the fruits of their hush-hush separate developments to speed up both processes, and Microsoft announced the adoption of TrueType. That must have been a sad day at Adobe! The Mac System-7 was released in late 1990 with TrueType, and Microsoft released Windows 3.1 with TrueType soon after.

Isn't it amazing that the two rivals can cooperate like that and still continue with the hugely expensive long running litigation over Windows supposedly stealing the Mac user interface.

Unfortunately, the TrueType implemen-

tation on the Mac apparently does not provide fully compatible interchange with Windows files using TrueType. That's a pity because most programs that are available on both systems, such as PageMaker, have interchangeable file formats.

☞   ☞   ☞

Well so much for the history and background information... Now we have our low cost publication quality font system, and all the fonts we could wish for -- in fact rather too much of a good thing! I will describe my own experiences with fonts to show what can happen. It is very easy for fonts to threaten to take over the whole system like breeding rabbits!

Before Windows

Before I started using Windows, my main font need was for publishing with Ventura. Without some sort of Type Manager or Postscript, a DTP system is not a lot of use even with a Laserjet. I couldn't afford a Postscript printer, so I bought LaserGo's Goscript software Postscript program. This comes with the common set of 44 Postscript fonts that match those in the Apple LaserWriter. You set Ventura to print to a Laserwriter, but to a file instead of a printer port. Then you run Goscript from the DOS prompt to process that print file and send it as graphics to the Laserjet. It gives excellent results, but is a bit slow. That's how I produced Significant Bits for a long time.

I could also use Goscript for any other DOS program that could write a Postscript print file. My wife uses WordPerfect, so it was used for that too on my home PC. WordPerfect is a bit stupid regarding print files however. Unlike other word processors, it requires the name of the print file to be set when defining the printer setup. You can't easily give it a name at the time of printing! So you have to exit to DOS and print with Goscript for each document. Rather a pain.

Windows 3.0

In due course I changed to Pagemaker 4.0 for DTP, and had (rather unwillingly) to adopt Windows 3.0 to do so. But I soon reversed my negative view of Windows as I became used to its facilities. Pagemaker came with ATM but only with three fonts; *Courier, Times,* and surprisingly, *Gill*

Sans instead of the usual *Helvetica*. That was rather a setback after Ventura with Postscript's 35 fonts, and I found Goscript didn't work very well with Windows.

Then I bought Corel Draw! 2.0. Corel came with its own set of fonts -- many fonts. But they were in their own peculiar form, only useable from Corel. However, Corel supplied a conversion program, WFNBOSS for converting their WFN fonts to Adobe Postscript format, which is used by ATM.

So I converted a selection of the Corel fonts to ATM. I selected basically the same set as the standard post-script Laserwriter+ set. However, because of copyright, they had different names to the usual Postscript set. *Helvetica* was called *Switzerland, New Century Schoolbook* was *New Brunswick, ITC Bookman* was *Brooklyn*, etc. But I could cope with that.

The only trouble was I had to keep both the original WFN Corel font files and the ATM font files on the disk to suit both Corel and Pagemaker. Also, I had hoped I would be able to retire Goscript by upgrading WordPerfect to Windows, but the Windows version proved such a dog I had to take it off and revert to the DOS version, so I still needed Goscript and all its font files.

Windows 3.1 & TrueType

Then the upgrade to Windows 3.1 came along, with its TrueType font system. TrueType also came with the usual 3 fonts like ATM -- a serif font, *Times*; a sans serif, *Arial*; and the usual monospaced *Courier. Arial* was yet another name for *Helvetica*. Those were not enough so I continued using ATM with the Corel 2.0 fonts added.

Then Microsoft made a special offer of a set of TrueType fonts, so I added those, which provided the usual Laserwriter+ fonts and more. However, they all had new names again! This naming business complicates your existing document files, as old files fail to find the old names. So I kept both TrueType and ATM systems active.

The next event of significance to all this was the upgrade of Corel to version 3.0. It comes with even more fonts, but merci-fully, they are now TrueType fonts rather

than Corel's own peculiar species. So all those lovely Corel fonts become immedi-ately accessible to all Windows programs!

A Font Explosion

By now I realised things were getting out of control. There were so many fonts I was a bit like Old Mother Hubbard with her kids -- and my shoe was rather too small! You can only really use a very few fonts in one document, or else it looks overdone. The use of too many fonts has become the common hallmark of un-trained page designers, now that these facilities are so readily available.
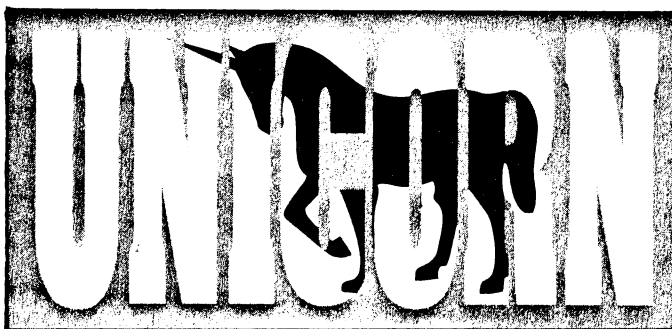
Font outlines & graphics manipulated with COREL DRAW!

Apart from the font proliferation, the size of Windows programs had caused a blow-out in hard disk demand. When I set up in business a couple of years ago, I thought a 100 Mb disk would be very generous. Now it had become absurdly inadequate!

Because of the type of my work, I have to keep more than one version of AutoCAD on line, and several big programming tools, as well as the DTP and artistic graphics software.

My first C compiler 10 years ago fitted on one 360k disk; my Microsoft C 5.1 came on five, but my latest upgrade to ver 7 C++ came on 22 1.44 Mb disks, all com-pressed! Soon I had everything that was not actually in use stored in compressed form. I have now installed a 240 Mb disk, and it's filling fast!

Taming the Epidemic

The time had come for some font ration-alisation.

This is what I now had: In the Goscript directory there was the Goscript program and its support drivers, and the 35 Post-script font files. That comes to 4 Mb. The Corel 2.0 WFN fonts had all gone. In the WINDOWS\SYSTEM directory, where Windows keeps all its TrueType fonts, there were the 154 Corel 3.0 font files, plus the original 14 Windows 3.1

TrueType fonts, plus the 44 Microsoft Font Pack files. They all add to a whop-ping 212 font files occupying 13 Mb!

In the \PSFONTS directory there were about 40 Adobe Type Manager fonts, in-cluding all those that I had converted from Corel 2.0's WFN fonts. They came to about 2 Mb. That's 15 Mb taken up just in fonts!

I decided ATM had to go. TrueType had become well established as the Windows standard, and had a much better supply of fonts than ATM. So deleting the ATM program and its fonts cleared up 2.5 Mb. Incidentally, un-installing ATM is not an obvious task. If you want to know how, see the panel.

Among the True Type fonts there were many instances of the same typeface existing un-der two names -- one from Microsoft and one from Corel. So I decided to use the Microsoft version as the more widespread of the two, and de-leted the Corel duplicates. The only ex-ception was the sans serif monospaced fonts. The Microsoft one, *Lucida Sans Typewriter* differed noticeably from Corel's *Monospaced* although both re-sembled the well-known *Letter Gothic*. The *Lucida* version was wider and thicker, so less suited to program listings, which is my main use for it, so I adopted Corel's *Monospaced*.

Careful Selection

I then made a careful selection of what remained. In all typeface sets they seem to give you a lot of near identical serif body typefaces.

I decided to keep only *Times, Bookman* and *Schoolbook. Times* is more compact (narrower) but not as good looking or easy to read as *Schoolbook*, and *Bookman* is very good for bigger headings. In the sans serif series, I kept *Arial* and *Arial Narrow* (equivalent to the ubiquitous *Helvetica*), plus *Century Gothic (Avant Garde)* -- a very geometric style good for display but not for body text.

For a monospaced font I kept both *Monospaced (Letter Gothic)* and *Cou-rier. Monospaced* is better for condensed program code, but *Courier* is better for paragraphs of text when mono spacing is needed.

Besides those I needed a few fonts for sparingly used special effects in display and headings. I selected several script or hand written styles, and some stylised heavier fonts for headings. I also kept some symbol fonts for bullets and other graphic elements.

That all came to 56 font files occupying 3 Mb. I have printed the final list to show you my selection.

Some Font File Tips

While sorting this out, I found I needed to restore some fonts that I had deleted. Font sets usually have to be installed by their own install program, which invariably will only install the whole lot.

So my tip is, having installed them all, copy them off to floppies before pruning out the ones you don't want to keep on line. Then individual fonts can be restored if need be. I used the ZIP facility in XTREE to put them in easily accessible condensed form on three 1.44Mb disks.

The font install programs generally do the whole job for you. If you do it manually, there are two steps. First copy the *.TTF files into \WINDOWS\SYSTEM, then run Control Panel - Fonts, and pick Add. Select the fonts you copied from the list. That creates *.FOT files to correspond with each TTF file, and makes them known to Windows. The FOT files are "font metrics" data that tell Windows how it can manipulate the TTF data in the Windows environment.

Sometimes it is difficult to identify the filename for the font name, but usually the abbreviation is reasonably obvious. The last letter usually indicates the style variation. Nothing or R indicates "Normal", I = "Italic", B = "Bold, BI or T = "Bold Italic", O = "Oblique". The real name is embedded in the TTF file but it is not easy to view it.

When deleting fonts from Windows, use Control Panel. Never just manually delete the font files. Be sure to tick the box for "Delete file from disk" each time, otherwise it only deregisters the font from Windows' font list. Don't delete any non-TrueType fonts (filetype FON) as most of those are needed by Windows for various purposes.

Finally...

I still have the Goscript fonts for WordPerfect. I tried to replace them with

---

To remove Adobe Type Manager from Windows 3.1

Use an ASCII text editor such as Windows Notepad or DOS-5's EDIT to edit the file SYSTEM.INI in the \WINDOWS directory (or whatever, if you didn't use the default setup). Find the section that has the heading [Boot]. You should see lines thus:

```
SYSTEM.DRV=ATMSYS.DRV
ATM.SYSTEM.DRV=SYSTEM.DRV
```

Place a semicolon in front of both those lines, thus:

```
;SYSTEM.DRV=ATMSYS.DRV
;ATM.SYSTEM.DRV=SYSTEM.DRV
```

Add the following line just after that:
```
SYSTEM.DRV=SYSTEM.DRV
```

Save the file.

Check that there is a file called SYSTEM.DRV in the \WINDOWS\SYSTEM directory. If not, which is unlikely, you will need to get it off the original Windows disks.

Edit the text file WIN.INI, also in the \WINDOWS directory. If there are any lines that begin with

```
Softfont=
```

disable them by inserting a semicolon as the first character.

Save the file and restart Windows.

You could delete the lines instead of disabling them by semicolons, but this way it is easy to restore if need be.

If you are disabling ATM so as to be able to delete it from the disk, delete the PSFONTS directory and its contents.

---

a few downloadable bitmap fonts since I only really need a couple of sizes of something like *Schoolbook*, and they would print directly from WordPerfect.

I got some from the Brisbug library (*Elfring Laserjet fonts*) as I didn't want to spend $200 for such a limited use. It was just as well they came with full instructions for installation into WordPerfect, as I would never have figured out the weird rigamarole myself and could find no advice at all in the WordPerfect manuals.
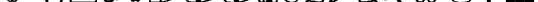
However, although everything seemed to be correct, WordPerfect failed to download them entirely correctly, so I still use Goscript. It handled the 12 pt as "normal" size in regular and italic but not the bold version! For the "large" size it printed 12 pt bold with 18 pt spacing!

If anyone can offer advice on that I'd appreciate it. WordPerfect and I never have understood each other!

Well there it is -- the saga of me and my fonts. I hope it may help others to keep theirs under control. Since then, I've already begun thinking... *maybe I ought to have some choice of "old style" and large "x-height" serif body fonts, such as Goudy or Century, or a 20's style like Lucian...* Watch it, boy!

PS: You may be interested to know that the title for this article was done with Corel Draw, which allows you to work directly with the font outlines from the TrueType or Postscript font files. You can not only stretch and squash them, you can twist them around, splay them, and individually edit the outline shapes as I did here to elongate the tops of the F's, and thicken the uprights. It started out as Bookman Bold.

Aardvark Bold (Corel) □ **Aachen Bold**

Arabia (Corel) = Arnold Bocklin

Arial   (Win31) = Helvetica

Arial Bold

Arial Bold Italic

Arial Italic

Arial Narrow (MS Pack)

Arial Narrow Bold

Arial Narrow Bold Italic

Arial Narrow Italic

Banff (Corel) □ *Brush Script*

Bodnoff (Corel) = Bodoni Poster

Bookman Old Style (MS Pack) = ITC Bookman

Bookman Old Style Bold

Bookman Old Style Bold Italic

Bookman Old Style Italic

Century Gothic (MS Pack) = Avant Garde

Century Gothic Bold

Century Gothic Bold Italic

Century Gothic Italic

Century Schoolbook (MS Pack) = New Century Schoolbook

Century Schoolbook Bold

Century Schoolbook Bold Italic

Century Schoolbook Italic

Common Bullets (Win31) ▶▷✛+✱✲✳✴✵✶✷⚬♀✝✝☺🔳▬◻♀◇◼◾◉

□□⛝⬛🔲◫◼◻▫✓⊠★✦♦◇□▣...⚫⬤ ◼◼◼♦ ●→▬▬◼

Courier New   (Win31)   (Fixed width)

Courier New Bold

Courier New Bold Italic

Courier New Italic

Cupertino (Corel) = Cooper Black

Cupertino Italic

Dawn Castle (Corel) = Dom Casual

Dawn Castle Bold

Freeport (Corel) = Freestyle Script

Homeward Bound (Corel) □ **Hobo**

Koala (Corel) = Kaufmann

Koala Bold

Lucida Handwriting (MS Pack)

Memorandum (Corel) = American Typewriter

Memorandum Bold

Monospaced (Corel) = Letter Gothic (Fixed width)

Monospaced Bold

Monospaced Bold Italic

Monospaced Italic

Monotype Corsiva (MS Pack) = Zapf Chancery

Monotype Sorts   (MS Pack) ✿✛✦✛✛✦◇★☆✪★★★★★☆✳✳✳✳✳✳✳

✳✹●✪✿✳✺✴✳✳✳✳✳✳●○◼⬛◻⬛◻▲▼♦✧▶◼◻➡✓ ✓✗✗✗ ✗ + ✎✐✠✝✳✗✛✗✦✗◼✿

✿✳✇✆➡✛✉✪☞'✗✳✗❝❞✛✛✦✛❮✐✍✏✆✛✝✝

Musical (Corel) = Sonata

Mystical (Corel) = Mistral

Paradise (Corel) = Park Avenue

Renfrew (Corel) □ **Revue**

Symbol (Win31)   ΑΒΧΔΕΦΓΗΙϑΚΛΜΝΟΠΘΡΣΤΥςΩΞΨΖαβχδεφγηιφκλμνο

Times New Roman (Win31)

Times New Roman Bold

Times New Roman Bold Italic

Times New Roman Italic

Wingdings (Win31)   ✂✆✇✐✑☎✈🖃🖂😊😐☹⑥*⚐♫🕭➜✛✿✦♁✞✝✠✡✿☪

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FOR SAFETY'S SAKE

Minimum requirements for ALL PC users (or, Murphy is alive and well and lives in your computer)

The problem that we are proposing to resolve is a failure of the battery installed internally in your computer. The following precautions will not require much time or effort - if done now - but will prevent a great deal of heartache later on.

Computers (with the exception of the older XT types) contain a battery which supplies power to the CMOS chip when the computer is turned off. I will not delve into a technical discussion of what is a CMOS chip - suffice it to say that this device remembers the SETUP which applies to your computer alone.

The items remembered include the time and date; the number and type of floppy drives (e.g. one 3.5" 1.44meg, one 5.25" 1.2meg, etc.) and other information but, most importantly of all, what type of hard disk drive or drives that you have.

There are numerous different types of hard disk drive. Do you know which type you have? Probably not! This information will be lost if the battery goes flat. Can you afford to take that risk?

A failing battery can cause errors at bootup and trigger "bad configuration record" or "failed battery" messages. Typical batteries have a useful life of about three years. However, when you remove the battery, you lose all the configuration information and have to run the SETUP program to restore the configuration. To make matters worse, many systems were configured originally by dealers or staff members who are no longer available.

One way to avoid this problem is to write down the SETUP information but even to extract this information can be unnerving for the inexperienced user.

A safer way is to use a program that will read the CMOS SETUP, store the information in a file which can be kept on a floppy disk and, when necessary, use a companion program to rewrite the CMOS SETUP. There are a number of such programs available, two of which are CMOSGET and GETCMOS (and their companion programs CMOSPUT and PUTCMOS). GETCMOS and PUTCMOS were written by our own BrisBug member, Geoff Harrod. Geoff is presently the editor of the Significant Bits Magazine. CMOSGET and CMOSPUT are part of

the PC Magazine utilities and were provided with the book "DOS Power Tools".

When you obtain one or other of these pairs of programs, they should be copied into either your root directory on drive C: (C:\) or a subdirectory which is already included in your computer's PATH. You can check the PATH by typing at any DOS prompt: PATH

The following is part of the description of CMOSGET from PC Magazine:

CMOSGET reads the contents of the CMOS memory chip and writes it to standard output; redirecting this output to a file saves 64 bytes of information. CMOSPUT performs the complementary function. It reads from standard input and loads the CMOS chip with the saved data. It again uses redirection to read the data file created by CMOSGET.
You can't simply restore all the old data, however, since you'd end up resetting the time and date that were active when you saved the 64 bytes, and would have to use SETUP to update them. CMOSPUT avoids this by getting the current time and date from DOS and using the BIOS to update the real-time clock (RTC).

Well, what do you need to do?

Fortunately, the solution is quite simple and only requires the following simple steps:

1. Format a bootable disk in A: thus
   ```
   FORMAT A: /S
   ```

2. Copy onto the disk in drive A: one or other of the program pairs (In this case, they had been copied into C:\DOS):
   ```
   COPY C:\DOS\GETCMOS.EXE A:
   COPY C:\DOS\PUTCMOS.EXE A:
   ```

5. Run the program to store the CMOS data on the floppy disk:
   ```
   GETCMOS A:CMOS.DAT
   ```

Please note that this file will consist of binary data and is not suitable to be read by a human.

These days, the SETUP program is usually permanently stored in your computer in the ROM (Read Only Memory). Some computers (again the older types) have a separate program. Ascertain, if you can, whether your computer has a separate SETUP program e.g. SETUP.COM or SETUP.EXE. Read the PC's manual.

For safety's sake also make backup copies of your AUTOEXEC.BAT and CONFIG.SYS as follows:
```
COPY C:\AUTOEXEC.BAT A:AUTOEXEC.SAV
COPY C:\CONFIG.SYS A:CONFIG.SAV
```

You will not actually need to use these copies, but they are there as a precaution against future loss.

Write protect the disk i.e. use one of the sticky patches to cover the cutout on a 5.25" disk or open the slide on a 3.5" disk.

Put the disk (and a copy of these notes) in a very safe place.

WHAT TO DO WHEN THE DAY COMES...

Change the battery.

Boot the computer from the floppy disk and ignore any error messages.

Set the date and time with the DOS TIME and DATE commands.

Run CMOSPUT to load the CMOS memory with the command:
```
CMOSPUT CMOS.DAT
```

Remove the diskette and reboot the computer. If everything works, you should get no errors and the correct time and date.

BY THE WAY...

There will still be plenty of room on this floppy, so I suggest that you also put onto it copies of the virus protection programs, SCAN and CLEAN.which are on your BRISBUG CATALOG disks.

Neil McPherson

Note from Geoff Harrod --
My CMOSGET and CMOSPUT programs and instruction text file are among a handful of other odds and ends on a disk that I jokingly called The Knightsbridge Utilities, as my business is called Knightsbridge Software Developments (Harrod's of Knightsbridge, if you don't see the point). They are very tiny programs, so they needed some company to make them feel safe on a great big 360k disk. I don't know what catalog number it is, but you should be able to find it with LOOKFOR easily enough.

Product Review

Borland C++ 3.1

Richard King

The latest version of Borland International's C/C++ professional development system continues Borland's tradition of excellence in delivering easy-to-use, powerful application development environments. Version 3.1 is now completely compatible with Windows 3.1 and also fully capable of producing 'executables' that take advantage of this environment. There are many other features for both DOS and Windows developers, however, such as colour syntax highlighting provided by both the DOS and the Windows IDEs (Interactive Development Environments).

What Is In the Box

In addition to the compiler (which is all we wanted and all we got not that long ago) you get the following tools to assist with application development:

> **For both DOS and Windows:** an IDE, Turbo Debugger, Turbo Assembler, Turbo Profiler, container class libraries, hypertext help files for everything

> **For DOS only:** Turbo Vision application framework classes, VROOMM (a memory/overlay manager);

> **For Windows only:** ObjectWindows application framework classes, WinSight message watcher), Winspector UAE analyser), Borland Resource Workshop, Microsoft Resource and Help compilers. The EasyWin library is also provided to quickly move DOS applications to the Windows environment.

The source to the container and application frame-work libraries is included along with megabytes of examples programs (including a very capable chess program).

As the previous paragraphs would suggest, the number of diskettes and the volume of documentation is Staggering. The software comes on 18 5.25-inch high density

diskettes and is accompanied by 14 manuals totalling over 5000 pages of documentation. For the first time Borland provides complete printed documentation for the Microsoft Windows API (Application Programming Interface), including version 3.1. You really do not need the Windows SDR (Software Development Rit).

Installation

An application development environment that is this rich is not small. If you are developing software for both DOS and Windows then installation of all components with all the examples and libraries will devour up to 57 Ms of your hard disk! Installing the bare minimum for Windows programming Still requires that you have about 20 MB free prior to installation.

The installation program provided with Borland C++ continues to be the worst aspect of an other-wise excellent package. In fact, there are very few installation programs these days that are as bad as this installation program. It doesn't tell you how much disk space is going to be used by your choice of options; it is only DOS based; it is next to impossible to determine what options you should pick for a DOS-only target environment or a Windows-only target environment; and picking and viewing your installation options using abbreviations is cryptic and error prone to say the least.

Worst of all when you are forced to go through the installation a second time you have to feed your cursed computer every single one of those floppies again must so the installation program can ask you for the next. It made me wonder whether the person who wrote this program had actually been told that Borland has products like ObjectWindows and Turbo Vision which make building user friendly interfaces a breeze.

Borland: you are not doing yourselves any good asking developers to fumble through such an abysmal installation program. It

The author

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could be a customer's first impression of a Borland product and, need I say it, last.

Windows 3.1 Support

The primary reason for the update is to give soft-ware developers complete support for developing applications under and specially for Windows 3.1 (hence keeping the version numbers in line). This means new header files, three Windows reference manuals, 3.1 specific examples and complete SDK help online. Support is included for OLE (Object linking and Embedding), Pen Windows, multimedia and Truetype fonts, common dialogs, DDE Management Library, drag and drop and even the screen saver API which is part of Windows 3.1.

386 Code Generation

Borland has not stood still since releasing version 3.0 only a few months ago and has used this version to include some new features in the com-piler. The compiler can now produce 386 code that makes use of the 32-bit registers found in 386s and higher processors.

Note: this does not give you a flat memory model—your applications are still hampered by DOS' segmented architecture with its 64 kB segments. It does, however,

give the compiler the opportunity to generate single instructions when performing arithmetic on long integers.

An ex-colleague of mine, Mike Rezny, now at the University of Queensland, purchased this version of the compiler just for its ability to generate 386 code. He has now converted two projects from Turbo C version 2 to this version and reports only one incompatibility (with the min() function). His only wish is that he could force the compiler to keep long integers in 32-bit registers; otherwise he is very happy with the product. The debugger has no problem displaying the 32-bit registers, once you discover the Control-R toggle!

Colour Syntax Highlighting

One of the best features (and many people reckon worth the upgrade price alone) is the addition of colour (DOS and Windows) and multiple font styles (Windows only) to the IDE editors. What could easily be dismissed as a gimmick turns out to be a very useful aid for indicating incorrect program syntax. More beneficial, however, is the general increase in readability it brings to a program Your eye can jump from comment to comment or you can skip comments and concentrate on the source statements. I have also installed the Borland font into Windows itself so that I can use this crisp font in other programs (ie text editors) as well.

Windows-Hosted IDE Improvements

The Windows-hosted IDE has been greatly improved. Gone is the Turbo C++ IDE provided in version 3.0. You now get, under Windows, the Borland C++ IDE with all the power and optimisations of the command line compiler.

Object file linking is now done by a 'real' Windows linker and not only are the resources bound to the executable by another 'real' Windows resource binder, but resource file dependencies are properly taken care of in the project files. If a resource source file (.RC) is out of date then a newly supplied Windows compatible resource compiler will compile it. This is much improved over relying on multiple saves in the Resource Workshop in version 3.0 or make files in versions prior to that. Overall compiling and linking speed is greatly improved over version 3.0 and there is no longer the annoying

memory page swapping when you switch from the IDE to another program after a compile and link.

Porting Experiences

At Unisys, where I work, we have moved from Borland C/C++ version 2.0 through 3.0 to 3.1. We have had very few problems with using source code that was originally written for Microsoft C 5.1 and other source code that was originally developed under UNIX with an AT&T translator/ compiler. We have successfully mixed C and C++ and moved from the small memory model to the large model.

In version 3.0 we encountered a bug with some very complicated macro definitions, which has been rectified with this version. The version 3.0 preprocessor would at times expand macros in the wrong order resulting in the wrong number of parameters being passed to some macros.

We have written many small and large DLLs (Dynamic Link Libraries) and marvelled at the ease with which we can debug functions in them from executables to which we do not have the source.

Turbo Debugger

Borland's debuggers have never failed to amaze me. They are brilliant examples of software engineering. The version included with this package, Turbo Debugger (for Windows) 3.0 is a true Windows program even though it, like its predecessors, only works in character mode. It makes debugging under Windows as comfortable as it can be under Windows 3.0. Windows 3.1 has remedied some of the problems with creating a true Windows debugger so here's hoping that a not-too-distant version of Borland C++ will include the perfect Windows debugger.

Templates

Version 3.0 of Borland C++ introduced full support for templates. Templates allow you as a programmer to do things generically or practically speaking to create classes or functions that allow you to perform the same operation on arguments of different types. For instance I might want one stack able to hold integers and another stack able to hold strings. The logic that creates a stack and allows me to push things onto it and pop things from it is the same in both cases. It is only the type

of thing I am pushing or popping. Templates allow me to define a generic stack class and then create an integer stack and a string stack. On top of the benefits of only having to program the stack logic once, templates provide compile time type checking.

Strict Type Checking

Talking of type checking, Borland C++ supports the strict #define when programming Windows applications. Defining strict causes strict type checking to be turned on. This prevents silly errors such as passing a handle to a window instead of a module instance handle to a function. Borland, along with Microsoft, is recommending that all new Windows programs be developed with this strict type checking enabled. The main reason for this is to ensure that your programs are portable to Windows NT and WIN32s with a minimum of changes. Borland has also included the new types (UINT, WPARAM, LPARAM, etc) and the updated Windows API function prototypes in their windows.h to get programs ready for the world of 32 bits now.

It seems ironic to me, as a fan of Pascal's strict type checking, that C++ is returning to the Pascal fold, which it left over a decade ago. Better late than never, though.

Manuals on Disk

Even though this version of Borland C++ is accompanied by more pages of documentation than ever before I feel we are being short-changed with the documentation. Those of you who already have version 3.0 will be disappointed at the lack of updated manuals. Sure Borland has changed the covers and inside pages to say version 3.1 but many of the manuals are identical. The Resource Workshop manual is unchanged yet version 1.02 of this wonderful utility is included. You have to read the manual.rw file which is installed in the ...\doc subdirectory to find out that you can now add version resources to files (a new Windows 3.1 feature). To build those nifty chiselled-steel dialog boxes that accompany all the Borland Windows products there are no less than three other *.rw files in the same directory that provide details on how to create Borland Windows Custom Controls (this is what

Background Review

CD-ROMs Are Here!

by Ash Nallawalla

One day you will get a CD-ROM drive for your PC and it might be sooner than you think. Two years ago I bought the largest hard disk I could afford—a 150 MB device, and thought that it would be adequate for my planned UNIX machine and a modest selection of Usenet newsgroups. I gave up on that idea when I found out how much it would cost to buy all the necessary software and hardware. I stayed in the PC world and started many personal endeavours that took up over 95 percent of the hard disk space at any given time. Some of the review software came and went but most of it wanted to stay—if I had a 1 GB drive I would have filled it!

I bought a tape drive during an overseas trip but a sysop friend convinced me that his need was greater than mine. I had intended to back up my installed software to tape and reinstall it as needed. Perhaps I'll do that one day, but I'll get on with the CD-ROM story.

CD-ROMs

I assume you know what is a CD-ROM. If not, a brief description is in order. Its full name is Compact Disc Read-Only Memory. It looks like an audio compact disc (CD) but contains the type of data that could be found on a PC's hard disk. It can hold just over 600 MB, so it is a convenient storage medium. As the name suggests, you cannot erase it or add to it.

CDs and CD-ROMs need to be treated with care. You must not place stickers on them because this tends to unbalance the disc and will make it unusable. You can use a permanent ink marker pen but don't use anything that requires pressure, such as an engraver or a ball point pen.

I've been an unabashed CorelDRAW! fan and when I saw the free CD-ROM in version 3.0 I knew I had to have a CD-ROM drive. Having access to a few attractive fonts and the thousands of clip art images was too strong a temptation to resist. I also had some old CD-ROMs I had picked up at Comdex—I wondered what lurked in those megabytes. Here is a brief look at some of those CD-ROMs and some current ones too. I have not seen all the listed items and have used vendor-supplied descriptions for some. My intention is to demonstrate the potential of this medium rather than dwell on the contents.

NetNews/CD

I have had access to the Internet through Deakin University and more recently courtesy of my employer. Long-term PC Update readers will recall my enthusiasm for the news available through the Internet—"Usenet." It is a great international resource and is almost free provided you have an account with an educational institution, a commercial site, or the few public-access dial-up services. It is not a substitute for something like Compuserve but has many similarities. If you like reading about any topic under the sun, chances are that one of the 3000 or so newsgroups will meet your needs. The problem is that the volume of messages generated every day by millions of participants is too large to manage even for the university machines. They delete old messages regularly, so if you are away for a few days you will miss a few. I should point out that not all this information is text—there are a few megabytes of public domain and shareware programs released every day.

The NetNews/CD is a monthly compilation of newsgroups and it includes many categories not commonly found at Australian sites. This is an ISO 9660 formatted disc that does not have an in-built reader at present for PCs. A reader for Sun is provided although I was unable to test it. I browsed through some of the newsgroups using Norton Desktop although for regular use I would have installed some news reader such as the Waffle BBS package.
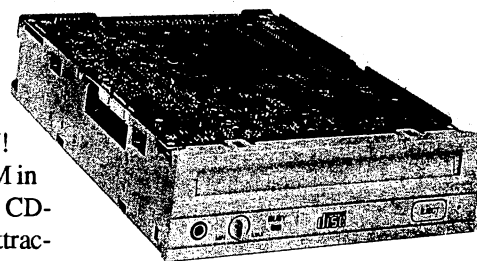
The copy I saw covered the period 12-23 May 1992. The thrill of having hundreds of megabytes of data within easy reach is one I hadn't felt for some time in the home computing context. I had heard about the US, European and Japanese news hierarchies and had wondered what they contained. Now I could see them. The shift-JIS Kanji didn't make any sense to me, nor did the messages in many European languages!

Another CD from the same company is NetGems but I did not get to see it. It is a compilation of 1991's software gems released on the Internet. It includes source code for many types of computer, X11R5, gnu, RFCs etc. It is available only for the Sun now but will soon be in ISO 9660 format.

Netnews/CD is a cheap way to have a permanent archive of USENET. Even people with net access subscribe to it for archival purposes. One copy costs US$39.95 + US$9.00 air mail to Australia; an annual subscription (including NetGems) is US$349.95 + US$180.00 air mail. Sterling Software takes Visa/MasterCard and can be contacted at (USA) 402-291-2108 or fax 402-291-4362. Email address is cdnews@sterling.com.

CorelDRAW 3.0

I have reviewed this product recently in this magazine so I will mention the features unique to the CD-ROM. The main attraction is that one can run the package from the CD-ROM, although it still wants about 750 kB from your hard disk. (You can still opt for a full installation on your hard disk.)

This CD-ROM comes with the standard disk package at no extra cost. In fact, I have seen some aggressive pricing in the low $300 region. The disk version installs the TrueType fonts on your disk but the CD-ROM also has the ATM equivalents. The 14,000+ pieces of clip art and symbols also live on the CD-ROM. The latest CD-ROM version in mid-October was 3.0B-A with files dated 1 July 92.

The part number is SW-464-UPDTE-E3.

Microsoft Knowledge Base

This is a customer version of Microsoft's knowledge base, that is, its accumulated knowledge about its own products. The licence is actually quite generous, allowing a site to network the CD-ROM and to make unlimited copies for that organisation, so that its software support staff and end users can look up a given topic for internal use.

Topics cover all Microsoft products for MS-DOS, Macintosh, OS/2, XENIX, CP/M-80, Apple DOS, and Apple][. Code from Microsoft Systems Journal is also provided.

The CD-ROM contains only about 100 MB of answers to questions not normally found in the manuals or those discovered after those manuals were printed. Microsoft support staff have access to a confidential version of this one but corporate support staff will find it extremely valuable.

The disc also contained the French version and some other useful files. The supplied Windows-based Multimedia Viewer makes searches easy to perform, although it only displays the first 400 topics that it finds.

Copying the entire CD-ROM to a hard disk is advisable if you wish to speed up a search. RRP not known.

New Releases from Microsoft

Recent press releases from Microsoft mention some novel CD-ROM titles but we were unable to see them:

* **Cinemania**. This contains some 19,000 reviews of movies between 1914 and 1991, biographies of actors, producers and directors, movie stills, dialogue from some movies, and a listing of Academy Awards. **RRP $115.**

* **Publisher CD-ROM**. This contains Microsoft Publisher 1.0, additional fonts, clip art and templates, the Design Pack, and online documentation. **RRP $299.**

* **Bookshelf, 1992 Edition**. This contains The Concise Columbia Encyclopaedia, Roget's II: The New Thesaurus, Bartlett's Familiar Quotations and The Concise Columbia Dictionary of Quotations, Hammond Atlas of the World, and The World Almanac and Book of Facts (1992). **RRP $300.**

Computer Library

I have seen a two-year old copy of this CD-ROM, which contains the text from several US computing magazines and, although it is expensive (even in the US), is still excellent value for the serious corporate researcher. Refer to PC Magazine for further information and pricing.

The local distributor of this Ziff-Davis product wanted me to sign a complicated evaluation agreement form that included being responsible for its replacement if damaged while in my possession; and having to return it within 10 days, at my expense. I declined. This might have been more generous than another distributor's offer of a seven day evaluation period (back in 1988) but I don't encourage our reviewers to give anyone this type of free publicity. (We make exceptions for our regular advertisers, though.)

Lotus CD/PROMPT

I have the April 1991 issue of this monthly, and it contains the following information:

* Lotus Technical Support Notes

* Lotus Product Documentation

* LOTUS Magazine

* Lotus Product Demos

* Lotus Add-Ins

* Supplemental Print and Display Drivers

* Lotus Upgrade Information

* Multimedia Demonstrations

Lotus informed me that this product is still available for an annual subscription of $2340. It is aimed at corporations as an alternative to a support agreement and it contains the same information available from the Lotus hotline.

Walnut Creek CDROM

This US company is best known for its snapshots of Internet file archives. Its products include the following (as described in its literature):

* **Simtel MSDOS CDROM**. This contains 640 MB or 9000+ files, representing source code, programs and text files from the famous Simtel-20 US Army machine at the White Sands Missile Range, New Mexico. Trust me, you'll curtail your BBS-raiding habits once you have access to this high-quality shareware and public-domain collection. US$24.95.

* **Garbo MSDOS/MAC CDROM.** Garbo is a machine in Finland that has some overlap with Simtel-20 in its coverage, but is sufficiently different to consider this

CD-ROM. Also has Macintosh files. US$24.95.

* **GIFs Galore CDROM**. This contains over 6000 GIF format images for those who like to look at images on a computer screen. Viewers for many platforms are included. **US$24.95.**

* **CICA Microsoft Windows CDROM**. CICA is a machine at Indiana University that specialises in Windows programs. This disc has 140 MB of programs, fonts, source code and information to keep the Windows enthusiast busy for days. **US$24.95.**

* **CDROM Caddy**. CD-ROMs require a protective jacket called a caddy. Although you can get by with the one that comes with your CD-ROM drive, you will soon get tired of using it because the manoeuvre is almost the same as taking a CD-ROM out of its plastic case. Why don't they sell CD-ROMs with a caddy and charge a bit more for it? Anyway, you can get Sony caddies for US$4.95 each from Walnut Creek CDROM.

* **Desktop Library CDROM**. This is a truly fascinating collection of some 2000 works in the form of straight ASCII text, all for a mere **US$39.95:**

Ancient Greek comedies and tragedies, the Iliad and Odyssey by Homer, writings by Plato and Aristotle, and Aesop's Fables. The complete works of Shakespeare, Chaucer, Virgil, and Milton, along with books by Mark Twain, Walt Whitman, Stephen Crane, Herman Melville, and Edgar Allan Poe. Bullfinch's mythology, works by Tolstoy, and Jules Verne. Hans Christian Andersen, Lewis Carroll, Charles Dickens, Arthur Conan Doyle, Jane Eyre and Wuthering Heights. There are texts of historic treaties, international agreements, US Supreme Court decisions, 1991 CIA World Fact Book, dictionaries and word lists; Internet RFCs and engineering notes. You cannot go wrong to get this one!

Note: A legal challenge concerning the public domain status of J.M Barrie's Peter Pan has been made as we go to press, so check before placing an order for this one.

Add US$10 for airmail shipping per order. Visa/MC/AMEX accepted. Fax (510) 947-1644. For orders of 10 to 24 CD-ROMs the US$24.95 price drops to US$15 each. For 25 to 99 the price plummets to US$10 each, so you may want to pool orders with friends.

Borland's Offerings

All the features of Borland C++ & Application Frameworks 3.1 and more are now featured on a CD-ROM.

With the Borland KnowledgeBase CDs, technical information is at your fingertips. KnowledgeBase for Languages and KnowledgeBase for Applications will feature the technical support database of questions and answers concerning Borland products. The Languages CD will also carry a current bug list. KnowledgeBase will be issued quarterly and will be available on a yearly subscription basis.

Further details and pricing not available when we went to press.

Kodak's Photo-CD

Kodak offers a service where you can get your negatives and slides scanned onto a CD-ROM. This is one way of preserving one's photographs and slides for a long time. Will we see the end of photo albums? I doubt it, because a Photo-CD holds only about 100 images and it gets quite expensive to take this approach for most of us. Overseas one pays about US$10 for the blank and about US$1.50 per image. Making multiple copies of a Photo-CD is no cheaper (per copy) than making one because recording the CD-ROM takes more time than digitising the images.

Kodak is going to start (in the US, naturally) a service called the Kodak Picture Exchange, which will hold millions of low-resolution images taken by commercial photographers. You can access these 75 kB images using a modem and if you want the high-resolution versions you are told how to contact the suppli-

ers of those images. A keyword-search method will enable one to search for specific images.

Types of CD-ROM Readers

Some CD-ROM readers require proprietary interface cards; others need SCSI cards. If you already have a suitable SCSI card in your PC you may wish to get a SCSI reader to save a card slot. Some readers are caddy-less; some require a caddy (cartridge). Some readers fit inside your PC, like your floppy drives—a 'backpack' reader is now shipping in the US for US$575. You can plug it into a parallel port, so it is not likely to have a high transfer rate but is convenient for sharing a reader among several users or for demonstrating a CD-ROM on a client's PC.

The NEC range of readers is covered in another article in this issue. They are expensive but many people seem to prefer a bit more for them because the new models are among the fastest. Ask NEC Home Electronics (03) 544-9200 for the

name of your nearest dealer.

One of our advertisers, Epoch Systems, sells Procom Technology readers that are slightly slower than the NEC CDR-74/84. The average seek time is 375-380 ms (against 280 ms on the NEC). These have Philips mechanisms. They also have a 340 ms model that uses a Sony mechanism. Epoch Systems has a very detailed catalogue of dozens of CD-ROM titles and other multimedia devices such as sound cards. Phone them on (03) 374-1410 for a copy.

Make Your Own CD-ROMs

Data Com, a Melbourne company (03) 417-3999, sells the JVC Personal RomMaker. This device makes CD-ROMs for PCs and Macs to the ISO 9660 standard or Apple HFS format. Such CD-ROMs can then be used or sent to a mastering plant to make multiple copies.

In the US, the Philips CDD 521 recorder lists for US$7995. Mastering a disk takes about 30 minutes on this machine, and blank disks cost US$40.

Buying CD-ROMs

You will find that the prices of CD-ROMs vary for a given title. You need to be sure why something appears to be a bargain, for example, the same title may be issued each year with improvements. The original, non-multimedia version of Battle Chess is still available from some sources. Microsoft Bookshelf and Grolier's Encyclopaedia are examples of CD-ROMs that get updated. Sometimes the same title may be used for both DOS and Windows versions. Some low prices only apply when you are buying a reader or when a reseller is trying to move old stock. Some may not be upgradable. The "CIA Factbook" seems to come with or without pictures, depending on the source. Compton's Encyclopaedia has three variations, with different names.

Conclusion

There is no doubt in my mind that you should consider buying a CD-ROM reader. Businesses will need them for quick access to large volumes of data; home users will want them for the multimedia entertainment value. ■
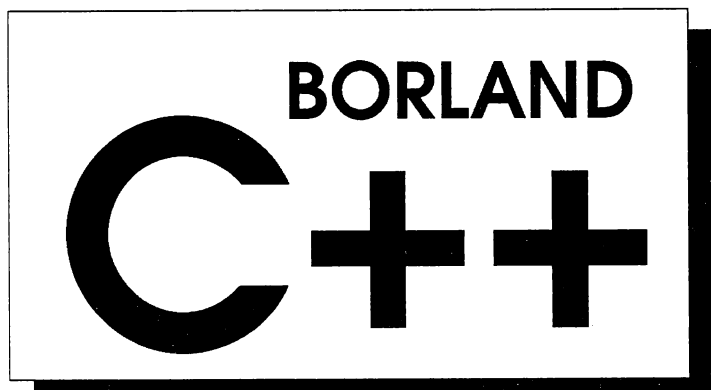
BWCC.DLL, which is installed in your Windows\System directory, supports). Once you've understood these meaty electronic manuals you'll not only be able to use custom controls in your programs but also add them to the Resource Workshop toolbox if you so wish.

Common Tools

Some of you will recognise my name as the author of the Turbo Pascal for Windows tutorial run earlier this year. You'll therefore realise that I have TPW on my long-suffering hard disk as well as this 'hippopotamus'. Why doesn't Borland anticipate this and make installing the language specific compilers easily separable from the rest of their tools. That way I'd only need one Resource Workshop, one Turbo Debugger, etc. I know this goes back to making the installation program more intelligent, but even if there's only a very small number of us out there with both languages it would make my hard dhsk very happy.

What Is Missing?

This must at first sight seem an incredulous question to ask. But there are some pieces of the evergrowing collection of tools that are required to develop applications, especially Windows applications, missing from this version.

The on-line help is superbly cross-referenced. All the C/C++ constructs and library functions are there, as is the Windows API if you're looking up help under Windows. Interestingly, the Windows help is more detailed in places than Microsoft's SDK help (such as having diagrams in the

OLE overview) and yet lacking in other places (such as not covering the new Windows 3.1 help compiler macros that allow you to extend the Windows help engine).

Also lacking is any sort of sample or configurable installation program (even an example program would do). If you write an application of any complexity these days then It needs an install program. The Microsoft Windows 3.1 SDK includes such a beast it has its own Basic-like scripting language) and I think most professional developers now consider this an essential utility. If the development system suppliers provide these programs then everyone wins in terms of consistency and ease of use. The alternative is yet more reinvented wheels.

Summary

Even with the recent release of Microsoft's C/C++ 7.0, which includes the Windows 3.1 SDK, Borland is streets ahead in providing a complete and fully integrated development environment under Windows. If you want to only work in DOS or target the DOS envlrorlment then you must still consider Borland's huge lead in IDE, debugger and memory management (with VROOMM) technology.

Disregarding the dreadful installation program, Borland C/C++ 3.1 maintains its position as the premier C/C++ development environment both for DOS and Windows. ■

Easy database Access delivers users more power

The talking point of 1991 in the personal computer marketplace was, apart from the recession, the success of Windows as a replacement for the MS-DOS command line. Users love it and, as a result, developers have rushed to build applications for it.

So one of the most peculiar anomalies in the personal computer market in 1992 has been that, amid all the excitement about Windows, there is such a dearth of Windows-compatible databases. None of the large software vendors has produced one. Neither have any of the traditional database suppliers.

It's all the more remarkable if you consider estimates which put the PC-based relational database market at $560 million. In 1991, databases amounted to 19 percent of the total application market for personal computers, behind word processors (39 percent) and spreadsheets (31 percent). This amounted to about 1.3 million individual programs on desktop units.

And now, leading innovator Microsoft has joined the fray. The company's first move was the acquisition from Fox Software of its highly regarded FoxPro database development package. That deal was announced last July.

The decision to buy FoxPro was a strategic decision for Microsoft. FoxPro is a database development language, compatible with dBase III and IV. In fact FoxPro is a superset of dBase, and runs dBase programs faster than dBase itself.

Since the language within xBase is the most common language in the industry, FoxPro is obviously a significant product for Microsoft

FoxPro 2.0 was featured as the number one selling product for the month of August on US-based Ingram Micro's PC Best Seller List. It outsold Borland's dBase IV and Paradox products.

Despite some controversy, Microsoft FoxPro retained its title as the fastest PC database. *The Software Digest Ratings Report Buyers Alert* issued the following statement:

"Due to a miscommunication between Microsoft and the National Software Testing Labs, FoxPro 2.0 was benchmarked in a way that put it at an unfair disadvantage relative to the other products in an earlier report. The test results in this report compel NSTL to retract its earlier characterisation that Paradox 4.0 was faster than FoxPro 2.0.

"The modifications to Foxpro's benchmark scripts and configuration produced a substantial performance improvement. The new results show FoxPro to be faster than Paradox in a majority of the NSTL performance tests."

Microsoft released the test results of the latest support services at the Fourth Annual Microsoft International FoxPro Developer Conference in the US, which more than 1700 people attended. It was the industry's largest ever company-sponsored PC database developers conference.

Fox also runs in all the right environments. Fox Software had developed a native version of its database on MS-DOS and ported it to the Apple Macintosh. More or less at the same time as the sale to Microsoft was completed, a Windows version was also announced.

But the addition of FoxPro to the Microsoft line-up is only half the story. Microsoft decided to re-think the whole idea of a personal computer-based database to fit into the philosophy of Windows. The result is a product called Access.

From Microsoft's point of view, the importance of Access cannot be understated. Microsoft database product manager, Nabeel Youakim, says it

will put the company in a powerful position to win market share from Borland. He says the two products, Access and FoxPro, will be able to address the database requirements of virtually any personal computer user.

Powerful engines

There are similarities between the two and thus considerable overlap in possible applications. Both run on PC platforms, both can be used by developers to write custom applications, and both offer powerful engines with which to do so.

"But there are also significant differences. FoxPro will appeal in particular to people who already have a commitment to xBase, the most popular database language," Youakim says. "FoxPro will run dBase code, in some ases 19 times faster than dBase IV. Access will not run dBase code. If it's necessary, dBase code will need to be rewritten to take it into Access.

"On the other hand, Access offers a much better development environment, one that has been designed from the ground up to take advantage of Microsoft Windows. It uses all the latest programming techniques and conventions."

But Access is more than just a development language. It will completely re-define the way a database should look and feel.

The first thing to note about the new product is its name. More than anything, Access gives access to data. Its flexible data formatting is designed so that it can read and write data in dBase, Paradox and Btrieve formats. You can even join tables in Access using data in the different formats.

Glenn Sloan, a software developer who has been working with a beta copy of the Access code, praised the product.

"I found its ability to link two different database structures quite astonishing. Not only can you see the data, but you can also modify the view and update both of the source files," he says.

If this degree of flexibility seems astonishing to software professionals, it is just breath-taking for business users. Better than 90 percent of all data held in personal computer databases right now can be accessed by an application written in Access, and the advantage this will give business users in accessing and working with corporate data cannot be overestimated.

> **"I found its ability to link two different databases quite astonishing. Not only can you see the data, but you can also modify the view and update both of the source files."**

Access will also perform regardless of the physical architecture in which it lives. It is quite happy on its own, or in multi-user, LAN-type environments. In fact, Access can be used as a standalone application on a PC, in a file-server configuration using a conventional LAN, or as the front-end client of an SQL database server like Oracle or SQL Server.

To understand this relationship, it's necessary to understand that there is a distinction between managing a database and running an application which uses the data in the database. A database manager is not necessary, since applications like Access, FoxPro, or even Paradox and dBase, can use their own individual index files to store their data.

However, as soon as the amount of data reaches any great size, or you wish to access the data using more than one application, it is a good idea to separate the data management from the application. If you don't, problems begin to appear. For instance, it can be extremely difficult to maintain a consistent data structure when three or four different applications are shuffling things around.

SQL Server is a product designed to facilitate the proper management of data. It's not an applications program, but it can enforce consistent data structures, integrity and so on. It's now much more straightforward to have, say, an accounting package written in Access, a sales analysis system in Excel and a payroll in FoxPro, all relying on the same fundamental data set.

The openness of Access is even further enhanced by Open Data Base Connectivity (ODBC). ODBC is a connectivity tool that will allow connection to a pre-existing database. ODBC compliant systems, like Access and FoxPro, can link directly to big mission-critical databases like DB2, Rdb, Oracle, Sybase and so on.

ODBC is a specification that defines a call level interface (CLI) or set of function calls for applications. The interface facilitates communications between an application and one or more database management systems (DBMSs).

Specifications

It is based on a specification developed by the SQL Access Group (SAG) committee. ODBC is not a product in itself. Microsoft Excel and the Visual Basic systems use the ODBC interface to access databases. The concept of ODBC as an interface instead of a product is somewhat intangible, but has

important implications for applications. In the past, developers created special code for each type of database users wanted to access. ODBC allows developers to write one set of code that accesses many types of database.

It allows users to access data in more than one data storage location and more than one database. It is based on the Structured Query Language (SQL) and offers flexibility.

So, what does Access actually look like? As befits a Windows application, Access is a visual product. Instead of having to design logical constructs on the command line to carry out a search, Access is designed so that the user can design complex queries visually with a function called Graphical QBE (Query By Example). It is possible, for instance, to drag and drop objects to join tables and to specify fields for display.

Comfortable

In fact, Access is designed to be as much an application as are Excel and Word. In this, it breaks with tradition. Conventionally, database programs are a collection of data access development tools. Before you can do anything useful, you have to develop an application.

Developers have spent a lot of time making this as easy as possible. But Access crosses a boundary, substituting visual fields for abstract logic. Access may just be the first database product with which users have ever felt comfortable.

Sloan says that it will be possible for users to define complete applications on their desktops without the need to write a single line of code.

"Extending this idea further, one can see that with ODBC in place, Access will provide a desktop user with power over data in the corporate mainframe. This data can be used as

source information for specific user-defined desktop applications," Youakim says. "To make Access more approachable, the Access development team used a usability lab at Microsoft. In the lab, they were able to watch users at work, and refine their code to give them a product they could actually use."

Part of the result was a complete rethink of the way online help is presented. For instance, Access has a new form of online help called Wizards, which users have liked in other products such as Publisher and Excel.

ReportWizards and FormWizards guide a user through the production of reports and forms using a question and answer technique. Tell Access what you want, and it will be done.

Pop-up advisories

One new idea is Cuecards. Cuecards are a series of pop-up advisories. They provide step-by-step help as you work with your own data.

This idea of visual processing penetrates into many areas. Access has a forms design function in which the

Sharing data in your workgroup with Microsoft Access

As a multi-user database, Microsoft Access is a natural fit for your workgroup. Multiple users can share data simultaneously. There is no more waiting for the person down the hall to finish his or her analysis before you can start your part of the project.

Microsoft Access allows you to share data with large or small groups of people, in a variety of different formats. Certain users in the workgroup can enter new orders while others simultaneously print the monthly sales report.

The automatic locking mechanisms in Access ensure that users don't step on each other's data.(And if you're running Microsoft Windows for Workgroups (WFWs) and a co-worker has locked a table to change its structure, you can simply use Chat to ask him or her to release your data!)

User-level security in Microsoft Access means that an administrator can set different permissions for different users or groups of users. Some can have access to sales data, others access to salaries, and still others to all of the data on the database. You simply assign user IDs and passwords and you're secure.

For more sophisticated workgroup applications, developers can use Microsoft Access, Microsoft Mail, and the Messaging Applications Program Interface (MAPI) to create complex, mail-enabled systems that can serve as the core of your business. These tools allow a developer to easily create the following automated system:

1. Order-entry clerks take phone orders and enter the information into a Microsoft Access database.

2. As the orders increase, the levels of finished-good inventories in the database decrease.

3. When inventories for a certain product drop below a predetermined re-order level, Microsoft Access sends an inter-process Microsoft Mail message to the appropriate person.

4. The message tells the person which product is in danger of running out, the remaining number of units, and the address of the supplier.

5. If no message has been sent back within a few days, Microsoft Access can send a reminder. ∎

Why would I need a database?

If this is a question you often ask yourself, then it might be time for you to spend a few minutes exploring what a database management system can do for you. If you're not at all sure what a database is, you're like many other PC users. The full power of database applications like Microsoft Access has, until recently, not been readily available to most users.

A key thing to remember about a database management system is that it gives you the freedom to separate the way data is entered from the way it is eventually used. Think about it: every day you're presented with data items in many different formats (lists, memos, business cards, handwritten notes) and you usually need to combine and convert these into different formats (status reports, summaries, analyses). With a database management system, you can enter data into a familiar-looking form on the screen, then use it in any way you like. You can ask questions (called "queries"), combine and sort data, and create numerous summary reports.

Well designed

For example, let's say you're a salesperson who wants to track your sales leads. You'd like to enter the name of each sales lead (taken from response cards and business cards), group the data by postcode, and then print out a weekly report to impress your regional directors.

Well, you could use a spreadsheet or word processor to organise the data. But then you'd have to take each data item, enter it into the computer in a way that looks nothing like a response card or business card, try to group it, subtotal it, and then print it out. Then, you've got to repeat the whole process next month. You're probably better off flipping through cards.

With a database management system such as Microsoft Access, each data item (or record) you enter is stored in one or more tables. Each table can have any number of forms or reports associated with it, which can be linked together to provide all the information you need in one place. With Microsoft Access you can even create and save different views of the data that you can use from month to month.

No database application is worth the investment if you can't rely on the accuracy of the data it tracks. However, a well-designed database management system such as Microsoft Access can help. The date fields in Microsoft Access accept only dates; numeric fields accept only numbers. You can specify exactly what entries are valid in a certain field – for example, you can require that any tax rate entered must be greater than zero.

You can even specify that a record for a customer who has a pending order never be deleted.

Whether you're working with hundreds or thousands of items in a database, you want to be able to get answers to complex questions – quickly and on demand. For example, let's say you want to know which customers ordered the greatest amount of a certain product in the past 18 months. The information you need may be in several different worksheets or documents, and it will likely take a long time to search for and combine this information. With Microsoft Access, you can create a query that answers this question – simply describe the information you want to search and combine, and then let Microsoft Access do the work for you.

Even if databases have always seemed difficult to you, take a look at Microsoft Access. You can be up and running with Microsoft Access in no time, and after exploring what it can do, you'll quickly see the benefits of a powerful database management system. ■

Database terms

A database is simply a collection of items of information that are somehow related to one another, organised in a way that makes it easy for you to group and sort them. You probably use many simple databases every day – your address book, client list, file cabinet, football card collection, May Gibb books, wine cellar, or whatever. A database management system is a software application that helps you retrieve the information in your database, sort it in any way you like, and produce lists and reports that help you easily track the data you're interested in. In a sense, a database management system is what turns data into knowledge.

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user can drag and drop fields from a list onto the form in the desired position. The report writer uses the same methodology, so that you can produce presentation quality reports, without writing, or even understanding, a line of code.

Almost certainly we will see users flock to use this capability. Effectively, it means the beginning of database publishing. The analogy with spreadsheet publishing – as happened with Excel add-ins several years ago – is almost perfect.

Another part of Access that is likely to be extremely popular is OLE (Object Linking and Embedding). Using OLE, it will be possible to create and edit objects in the database – such as sound, graphics and video objects. OLE can also be used to manipulate Word for Windows documents.

In the final analysis, though, a database program is still primarily a development tool, and Microsoft have not neglected the developers at all. Access comes with powerful development languages which can be used to develop wonderful programs, but they, too, are designed to make the developer more productive.

Access Basic, for instance, is a modern, block structured programming language that includes all the familiar programming structures while retaining the English-like flavour of Basic. Its development environment is similar to other modern Microsoft Basic products. The online help is based on that offered in Visual Basic, for example.

And what of the future?

Youakim says that over time, one might expect to see a cross-fertilisation of the two products, Access and FoxPro, until eventually they may merge as one. ■

— Jon Fairall

Making the most of DESQview

Paul Marwick

Never let it be said that "Significant Bits" doesn't listen to its readers. Recently, Mackay reader, Gabrielle Barbare requested an article on DesqView. It so happened that Paul Marwick, who is an official Beta-tester for Desqview, had a story in preparation. Here's the fianl result.

Setting up your Machine

To begin with, you need to set your machine up for optimum performance with DESQview. There are a few tricks that can help in this area. The first one is to maximise the amount of free memory you have in DOS before you start DESQview. The more free memory you have before starting DESQview, the larger the DESQview task you can run.

Maximise free memory

With this in mind, go through your CONFIG.SYS and AUTOEXEC.BAT and have a look at any device drivers and TSR programs that you load. You'll most likely have ANSI.SYS (or some equivalent) loaded. You may have a TSR command line editor like DOSEDIT or CED loaded. If you do have such things loaded, they are good candidates for removal. Neither of these types of programs will be of any use to you within DESQview, so you can save memory by not using them. If you do need such items, you would be best to load TSRs which can be unloaded before you start DESQview. By doing such things, you maximise the amount of useable memory you will have once DESQview is running.

In this discussion, I'm assuming a minimum level of equipment of a 386sx. While it is quite possible to make DESQview work, and even do useful work on an XT or AT class machine, the complications involved, and the compromises that you must make in order to make it work effec-

tively go beyond the scope of this article. By the same token, I'm also assuming that you will use a 386 memory manager such as QEMM or 386MAX, which allow you to make the maximum use of the power of a 386 machine.

For practical purposes, a minimum of 2 megabytes of memory will also be assumed. With less than that, you would probably be better using a task switching program such as Back & Forth, since the overhead involved in DESQview would not really be justified by the amount of useful multitasking that you can do. For best results, 4 megabytes of memory is a good figure. This amount of memory will give you plenty of space for a reasonable number of different tasks. Of course, if you have more memory than that, so much the better...

Using QEMM or 386MAX, you can maximise the amount of DOS memory available to you. This involves loading device drivers and TSR programs that you must have into high memory, above the 640K mark, but below 1 meg. Both the above memory managers come with utilities to help you do this, and you should take advantage of those utilities.

Use a Disk Cache

You should also consider a disk cache. While it is very machine dependant, some hard drive subsystems suffer a fairly severe performance penalty under DESQview, which can be greatly reduced by use of a good disk cache. There are a number that you can choose from. Personally, I've got very good results from Hyperdisk (currently HYDK432), but if you can't afford Hyperdisk, you can try something like EMC110, which is a freeware EEMS disk cache. In any case, I would recommend that you use an EEMS rather than an extended memory cache. And, if possible, load the cache driver itself into high memory.

By doing this, not only do you maximise the disk sub-system's performance, you

will also save more conventional memory, since in almost all cases, if you are running a disk cache, you can reduce the number of buffers that you need. For instance, I run BUFFERS=8 in CONFIG.SYS without suffering any ill-effects. You could possibly reduce this figure even more, though you will need to experiment with this to see what best suits your machine and applications.

Auto-installation

DESQview's auto-install is one of the best around. It will prompt you for your serial number, then copy the necessary files to your hard disk. While it will modify your CONFIG.SYS and AUTOEXEC.BAT, it will always back them up before doing so, unlike all too many other install programs. When the installation is finished, it will drop you into the setup routine to allow you to set defaults for your system. DESQview offers two setups - one a simple one, the second a more advanced on.

Initially, you might just as well take the simple setup option. This will ask you to confirm things such as use of colour, the type of video adaptor that you have, what mouse (if any) you have. After that, you will be prompted to save the setup information or not.

Customising the Set-Up

Once you have the initial setup done, you can proceed to confuse yourself in style. When DESQview first installs, it searches for applications that it thinks it knows, and installs them for you. Like every other program of this sort that I've ever encountered, it is often makes mistaken. Some of its mistakes can be quite amusing as well. However, it does install a couple of sample programs so that you can test some of its features, especially its ability to move data from one task to another. Sample Spreadsheet and Sample Document are detailed in the DESQview manual, and are there primarily to demonstrate the DESQview cut and paste facility. Once

you've tried them, you can remove them from the DESQview menu, and also remove the associated files from your disk.

You may also find that you need to modify some of the automatically installed programs. DESQview uses defaults for setting up these programs that may not suit your memory requirements, or your usage of the programs. Again, only experimentation will get you final answers.

Two ways to run DESQview

There are two quite distinct ways of using DESQview. One is to use the program direct from DESQview (which is the way in which it will install programs when it finds them). This has some advantages - since the program is run by DESQview, there is no need to load another copy of the command processor, which maximises the amount of memory you have available for other things. However, it also means that you must have DESQview menu entries and their associated definition files for each of these programs. And it also means that you are restricted to running the programs from the directories specified in the window definition files, which can involve entry of long path names to get at necessary files.

The other method of using DESQview is to open multiple DOS windows and run programs from the DOS prompt. This has the advantage of being more familiar to most people, since it is much closer to the normal DOS working environment. It also has the advantage of keeping down the number of items that you have declared on the DESQview open window menu. However, it does also have the penalty that any such window that you open requires a new copy of the command processor be loaded, which has some memory penalties.

For most people, a mixture of the two methods provides an optimum solution. Some items naturally lend themselves to being run directly from the DESQview menu, others are more naturally run from the DOS command line in their own DOS window. There are also some DESQview specific programs which really need to be run from the DESQview menu, including a few that are supplied with the package itself. For instance, to make proper use of the Memory Status program, it must be run from its own window definition file. There are also a number of useful small programs which are DESQview specific which can take the place of useful DOS

TSR programs (for instance, there are clocks, calendars, ASCII charts and similar items which would make no sense to use as TSRs under DESQview, but which can be given their own window for use with DESQview.

DESQview provides a number of sample program definition files. There are several DOS window definitions provided, including one called 'Big DOS'. You can make use of these definitions to produce your own definitions to suit your own usage. In the same way, you can use the DESQview 'Add a Program' facility to add new definitions for your own programs. These may require some experimentation, but the majority of DOS applications can be made to work under DESQview with a bit of fine tuning.

Performance tuning.

There are a number of things that can be done to maximise DESQview performance. Some of these are simply a matter of changing the original defaults that DESQview sets up when it is first installed, and some take a bit more planning.

First, when DESQview installs itself, it sets the default foreground/background time slices to 3/9. While this means that the foreground task always gets the best performance, in most instances, it doesn't seem especially necessary to do this. With most 386 base machines, an equal time slice for foreground/background priority works well. You should try something in the range of 1/1 to 4/4 for best results (the best figure will differ, depending on machine and applications used). One of the shortcomings of DESQview is that it has no ability to set absolute priorities in terms of allocating CPU time. So you can't assign a particular task greater priority than any other, nor can you specify that another task is of low priority. *Pity...*

DOS buffers

Another item that is set in the advanced setup menu is 'DOS buffers for EMS'. This figure defaults to 2K when DESQview is installed. Quarterdeck mention in the manual that if you have a 386, you may well find that reducing the figure to 0 gives you best results. In my experience, this is definitely true. Floppy disk and hard disk performance are almost always better with DOS buffers for EMS set to 0. The only exceptions to this may be some machines

running under Networking (though even there, running machines using Micom ethernet cards, using TCP-IP for network software, I've found that DOS buffers for EMS = 0 seems to work best).

There are a few other things that can be done to fine tune DESQview's performance, but they will differ depending on your use of the machine, and are probably best left for experimentation once you have the system running.

Problem Areas

There are some things that DESQview does not handle terribly well. One is floppy drive access, another is printer control. Floppy drive access has improved a great deal with the most recent versions of DESQview, but is still tied to the design limitations of the PC when it comes to handling floppies. As a result, formatting and copying files to and from floppies tends to lower access times in other tasks considerably. This is a pity, but it is something that there is little chance will get very much better. Formatting floppies can be made much more bearable by use of something like DVformat (see later). For the rest, you simply have to accept that floppy operations are not going to be terribly fast, and that they are going to have a marked impact on performance in other windows.

Printer handling

Printer handling is also subject to a few problems, though they are not near as severe as the floppy access problems can be. First, it is a good idea not to use the DOS PRINT command at all under DESQview. There are several other print spoolers that can be used without having the unfortunate side effects of PRINT. If you must use DOS PRINT, the best option is to load it into memory before DESQview is started.

This is one area where you will have to experiment a bit. If you run a word processor which will save documents in a format ready to print, there is probably the best option - you can then use one of the DESQview aware spoolers to print your document from another task.

Another option that is worth considering is a hardware print buffer. Such devices are fairly readily available, and can save a lot of time if they can dump the print job

out of the machine itself rapidly. This then allows the system to go back to normal processing with minimal interruption. If you have something like a 256K print buffer, the majority of print jobs will be moved off the machine to the hardware buffer in a very short space of time, reducing the load on the machine consequently.

DESQview scripts

DESQview provides a scripting facility which can be useful in a number of different ways. It is basically a key stroke recording/playback facility, but there are many things that can be done with it. There are also a number of different classes of scripts that can be used.

First, you can use the scripting capability on the fly to help automate a repetitive job that you're doing in an open window. A script of this sort does not even need to be saved, if the job is likely not to be repeated.

The other aspect of DESQview scripts is in task automation. DESQview has the ability to automatically execute a script file whenever a task is opened. It also has the ability to automatically execute a script file when it is first started.

In the latter case, it means that you can define what tasks are started every time you start DESQview. You can set up the startup script so that it will open your spreadsheet, wordprocessor, or whatever application you expect to be using as soon as DESQview is started. As an example, on my machine, the startup script opens a DOS window, opens the window which runs the BBS, and also opens a window hich runs a DESQview specific file manager (its very convenient to have something like a file manager running in a background task all the time, especially one which is built for use with DESQview, and hence uses minimum system resources to run). When all three tasks are open, the script switches so that the second task (the BBS) is the foreground task.

Once your main tasks are running, the startup scripts for them will then run, to set the environment to your requirements. These can be simple, or they can be quite complex. Perhaps an example is the best way to illustrate what they can do...

I mentioned that when my system is started, it opens a DOS window as the first window. That window has its own startup script,

which does several things. A converted version of that script is below:

```
{Learn {^BackSpace} "!direct"}
ansi{Enter}
c:\bin\dosedit{Enter}
prompt     $e[0;36m[Dw#]$_$e[1;33m$p$g$e[0;36m{Enter}
 promptw#{Enter}
vgamode 3 50{Enter}
cls{Enter}
{Finish}
```

The text within curly braces is the DESQview specific information. So, the top line sets the fact that the script is being learnt, sets the key that is being redefined to operate it (in the case of an autostart script, you should chose a key combination that is not likely to be used within the task). The "!direct" is the name of the script - whenever DESQview encounters a script name which starts with an exclamation mark, it recognizes it as an autostart script. Below that are the commands that are executed. So, when the window is opened, DOSEDIT is loaded, an ANSI driver is loaded, the prompt is set, a small DESQview specific program reads the task number and feeds it into the prompt, a vga mode setting program is run to set the screen to 50-line mode, and the screen is then cleared. There is really no limit to what can be done in such scripts - they simply act as though you were entering the data from the keyboard.

DESQview stores the script files in binary format. However, a program is supplied with DESQview which will convert them to ASCII (the sample above was produced by running the script through the converter). When you first get started with DESQview scripts, using the 'learn' method is obviously the easiest approach. However, once you have a reasonable number of scripts, it is often easiest to make modifications to those scripts by converting them and editing them, then reconverting them to binary format. Quarterdeck will also sell you a series of DESQview specific programs that they call the "Companions", one of which is a simple editor which has the ability to directly edit DESQview scripts and save them in the correct format (I don't personally recommend this -while I do own a copy of the Companions, none of them are on my system, and I've found using a different method for script editing a lot more productive - I'll talk about that method of script editing later).

There are some scripts which simply cannot be learned. For instance, there are times when I want DESQview shut down without manual intervention. This is done with a script file combined with an external program which allows starting a DESQview task from within another DESQview task. Learning a script of this sort (which involves quitting from DESQview) is quite impractical - the final commands in the script are the ones which quit DESQview, so you would never have the opportunity to save the script...

Data Transfer

Possibly DESQview's most useful in-built feature is its ability to transfer data from one task to another. This can be used to move data between applications which might not otherwise allow for data transfer, and can be used as a very useful way of capturing data for use by other programs.

There are a number of illustrations of using DESQview 'cut & paste' in the DESQview manual, so I won't go into those in detail. However, those examples miss some of the easiest and most convenient uses for Cut & Paste, which I should perhaps illustrate.

Cut-and-paste

One common use I make of cut and paste is on the DOS command line. I've just done a directory listing, and I wish to use one or more of the file names which have just been displayed as arguments for a DOS command. Since I'm lazy (and sometimes use filenames that aren't exactly memorable), I activate the DESQview cut & paste facility, move the cursor up the screen to the displayed file names, and capture them into the DESQview buffer. I then enter the command I wish to execute, and activate DESQview's transfer capability to transfer the file names into the command line. After you've used that facility for a little while, you could be

excused for wondering how you ever got anything done without it...

Another simple example is use while calling a BBS. I'm doing a file listing, and I see a file that I want to download. So I use cut & paste to store the filename in the DESQview buffer, and continue to view the file listing. I find another file I want, and use cut & paste to append the second filename. Once I've reached the end of the listing, I may have several filenames stored. I then enter the download command, activate the transfer function, transfer the first filename, then, when prompted by DESQview for the character or characters I want to type between lines of data, I enter a space, then instruct DESQview to transfer the rest of the data. DESQview will then dump the file names I've stored, placing a space between each of them. I can then press the enter key to start the download. This saves me having to try and remember all the file names, and possibly making a typing error when I enter them.

There are many other uses for DESQview's cut & paste facility - I'm sure you'll come up with many once you start to use it. It can be a very great time saver.

Using a mouse with DESQview

DESQview comes with support for most PC rodents. However, unlike an environment like Windows, which is almost unusable without a mouse, DESQview really doesn't need a mouse. Indeed, if you are a reasonable typist, a mouse is probably somewhat counter-productive for most DESQview operations. While it is quite possible to use a mouse button to call up the DESQview menu, then use the mouse pointer to move the cursor bar to the application that you want and press the command button to select it, it is almost certainly going to be a lot faster to tap the DESQview attention key (usually the ALT key), tap the "o" key (to select the "Open Window" command, and then tap the two key combination that activates the application that you want to start. About the only function in DESQview which (in my opinion anyway) is more useful when performed by a mouse is the mark process in DESQview Cut & Paste - its a bit faster moving the mouse cursor around for such applications than it is using the keyboard cursor keys.

Multitasking

Since most of the discussion of DESQview is concerned with its ability to multi-task, we should probably give a little bit of consideration to multi-tasking before we start discussing how DESQview handles such things.

The subject of multi-tasking can produce almost religious zeal in some people. And the arguments on the subject can be endless....

The general definition of multi-tasking is executing multiple programs similtaneously. This definition isn't really terribly useful, since no single CPU machine can really execute multiple programs simultaneously. However, given the speed of modern processors (or the lack of speed of human senses?), it can appear that a single CPU machine *is* executing multiple programs similtaneously. This might better be defined as serial multitasking. In this model, the machine CPU executes a single prgram for a given period of time, then moves its attention to the next program, while the first one sits idle, waiting for its next opportunity to access the CPU.

This type of multi-tasking is quite useable and quite useful. Modern CPU's are fast enough that it is quite possible for them to switch between multiple processes quickly enough to give the impression that the programs are executing similtaneously. Also, given that many other parts of a modern computer are nowhere near as fast as the CPU (disk I/o, for instance, is much slower, even with the quickest hard drives available), there will be many periods when most programs have no option but to wait for other parts of the machine to catch up. Switching away to another process while one process is waiting for disk I/O allows one to make maximum use of the machine's resources.

There are a number of other aspects to multitasking. Some operations are time-critical. In other words, if they don't happen at the right time, they will fail. Serial communications are a good example of time-critical processes, as are network communications. In a single tasking machine, this type of process is given greater priority than other aspects of the machine's

DESQview also has a bit of a problem with its handling of the mouse. I presume that this is a general problem - I've certainly encountered it on every machine I've used with DESQview and a mouse. This problem is that when an application makes use of the mouse, DESQview seems to partially lose track of it. After a DOS application has used the mouse, the mouse button that will normally call up the DESQview menu no longer works, and the normal diamond shaped mouse cursor that DESQview places in each window will disappear from the window which has made other use of the mouse. An annoyance, to say the least, especially when there are some DOS programs which will always make use of a mouse if they find the driver loaded.

DESQview also offers a facility that it calls the 'keyboard mouse'. Tapping a key (the CTRL key, by default) will activate the 'keyboard mouse' and allow you to use the cursor keys as though they were a mouse cursor control. Personally, I've never found much use for this facility. Indeed, I generally find it so annoying that I've gone into the DESQview setup menu and disabled it.

Multi-Processing with DESQview

One ability that most multi-tasking operating systems possess is the ability to 'spawn' another task from within an oper-

performance. In a situation where multiple processes are sharing the machine, handling time-critical sections of a program becomes even more important. To effectively multitask such programs, preemptive multitasking is required, so that time-critical tasks can demand immediate access to resources that they need.

There are a number of things that any multitasker, be it a multitasking environment such as DESQview or Windows (I note with some amusemeent that recent copies of Windows call themselves an operating system -maybe its time someone took Microsoft to court for false advertising), or a full multitasking operating system such as Unix or OS/2 must do.

The multitasker must include some form of scheduler to allow multiple tasks to access machine resources. It should also include some form of arbitration, to prevent multiple tasks trying to access single devices (such as a printer port or a serial port) similtaneously. It should (ideally) include some method of setting the priorities of different tasks so that tasks which are time-critical in their operations can be run without failures due to being unable to access resources that they need WHEN they need them.

On top of these things, the multitasker must provide some form of interface, so that users can access the multiple tasks that may be running. And, hopefully, some means of communications between the operating tasks.

These requirments are made even more stringent when the tasks to be multitasked are DOS tasks. DOS was never designed with multitasking in mind, and the majority of DOS programs expect to have full control over the PC on which they're operating. Not only that, but many DOS programs write directly to PC hardware (mainly for performance reasons) rather than going through the machine BIOS or the services provided by the operating system. In addition, while operating systems designed with multitasking in mind have provisions to prevent conflicts over file access by multiple tasks, DOS is limited to SHARE, which was designed (and not terribly well, even then) with LAN use in mind, rather than with multitasking in mind.

As you can see, there is quite a lot involved in making a system multitask. The fact that DESQview does as good a job as it does with DOS programs is a quite remarkable achievement.

ating task. This is sometimes called 'forking', or 'multi-threading'. It can be very useful. A simple DOS operation which displays some of the power of this ability is the PRINT command, which is capable of primitive multi-tasking in its own right, since it will operate in the background while the machine is being used for other purposes. Operating systems such as Unix or OS/2 offer much enhanced abilities of this sort, with the ability to start a task from an operating task, while the first task goes on without interruption.

DESQview itself does not really posses this ability. However, there are several utilities available which allow such operations. Possibly this ability is best illustrated by an example.

When a BBS caller logs off from my system, there are a number of operations which need to be performed. Some of them involve updating statistical information and associated display screens. Others involve exporting any mail which the user may have entered, and packing it for transmission. While it would be quite possible to do these things in a linear fashion (ie, in the same task as the BBS is running, and before it goes back online to wait for the next call), with DESQview, they can be done by forking to another task to perform them. This means that the system is back online and waiting for the next call much more rapidly than would be the case if it had to perform all these tasks before restarting. As a result, in the batch

file which controls the BBS, there is a command which starts another DESQview task to take care of this housekeeping, while the task in which the BBS runs goes back to waiting for callers.

Communication between tasks

This example also brings up another topic which is of importance in a multi-tasking system - communication between operating tasks. In this instance, there are a number of variables which will alter the type of processing which is done. Some of the processing (the statistical processing for instance) is constant. However, some varies from call to call. For instance, mail will not be entered by every user. And users that do enter mail can enter different types of mail, which requires different types of processing.

The BBS software has the ability to signal to its own batch file what type of processing is required. It does this using DOS errorlevels, which can be trapped by the batch file to act as branching points for the required processing. So, if a user has entered a netmail message, the BBS exits with a particular errorlevel. If a user has entered an echomail message, the BBS exits with a different errorlevel.

In a single tasking situation, this is easy to handle. The errorlevel is trapped through normal DOS batch file processing methods, and different processing is invoked depending on what that errorlevel was. However, when an entirely new task is being started, there is no direct way of transferring the errorlevel return from the BBS across to the new task. So we need a way of passing a signal from one task to another so that the correct processing can be accomplished by the second task.

The easiest way of doing this is to use what are known as semaphores. In this example, a file acts as a semaphore. The exit errorlevel is trapped, and the batch file in the first task is used to create a file in a specific directory. The batch file which runs the second task tests for the existence of that file, and, if it is found, uses it to determine what processing is required. When it is finished, it deletes the semaphore file, so that the same processing will not be repeated unless it is necessary.

This sounds like a fairly primitive method of communicating between tasks, but it is easy to do with standard DOS tools and commands, and it is very effective. The

semaphore files that are created are 0 length, so they consume a directory entry, but they don't occupy any disk space. They provide a reliable means of communicating between two concurrent tasks.

The DESQview "MAILBOX"

DESQview does also provide its own method of communicating between tasks. Each DESQview task creates a "mailbox", which acts as that avenue of communication. From a user point of view, mailboxes are of limited use, since a DESQview user has no direct way of accessing those mailboxes. However, some DESQview aware or specific programs can make use of mailboxes. One common use is to have a specific name assigned to a task mailbox, and test for that name to ensure that a task can not be started multiple times (when a task accesses hardware, such as a serial port, having two tasks access the same serial port is a guaranteed way of causing machine lockups).

While the example I've given of inter-process communication and multi-processing is fairly specific to use with a BBS, the same principal can be applied to almost any DOS task. So, you could have your wordprocessor started by a batch file which, on exit, starts another task to print the document you have just been working on in a second task, leaving you to continue working uninterrupted in the first task. There are numerous possibilities for this type of multi-processing, which can make your machine a great deal more productive.

Task Scheduling

Another aspect of multi-tasking is the ability to schedule tasks for specific times. This can be done with any machine, within some limits, but it is especially useful in a multi-tasking situation.

There are a number of programs available to assist in this type of operation. One, which is not DESQview specific, but is DESQview aware, is CRON.

CRON.

CRON is a derivative of the Unix utility to schedule tasks. In a DESQview environment, it can be left active in its own window, and when it reaches the time/date specified by its control file, it will launch a DOS task, logging errors, and returning to its idle, waiting state when that task completes. Something of this

sort is much more difficult to do in a single tasking DOS situation than it is under DESQview, since you either have to leave CRON is control of the machine until it is time for the task to be done, or you have to load some form of TSR program which becomes active at a preset time to complete the task. In the latter instance, you will have problems if someone has accidentally left the machine running an application.

However, under DESQview, the CRON task can be a completely independent task, and can operate whenever it is called to, without interfering with the rest of the operations of the machine (with the limitation that the task it is to operate must not interfere with operations going on in other tasks).

The limitation of CRON for DESQview is that you will have to assign sufficient memory to the CRON task to allow for the biggest program that you want CRON to run. This can mean having a fair bit of memory locked out of more general use, which is not necessarily desirable. Which brings us to the other task manager available for DESQview.

DVTMAN

DVTMAN is a DESQview specific task manager. It differs from CRON in that, instead of executing DOS commands at a preset time, it will open a DESQview task at a preset time. Because of this, it will not involve allocating quite so much in the way of system resources. In itself, it only occupies a small amount of memory, and it can open any predefined DESQview task.

DESQview programs

Much of my recent discussion has been moving away from what DESQview itself is capable of, to discuss what it is capable of with the help of ancillary programs. So it is probably time to move the discussion to what programs are available to make DESQview more useful.

In one sense, DESQview's greatest strength is also its greatest weakness.

It was primarily designed to allow multi-tasking of DOS applications, something it does surprisingly well, considering that it is handling applications that were never designed for multi-tasking, but expect to have virtually free control over the resources of the host PC.

However, because of that ability, there are not a great many programs that have been written specifically for use in a DESQview environment. And you don't see the type of thing that you see with Windows, where there are specific Windows versions of applications.

I suspect that this, in itself, is enough to explain the relative lack of knowledge or appreciation for DESQview. With a product like Windows, applications almost have to be written as Windows specific to operate successfully. While Windows 3.00 does offer the ability to multi-task DOS applications, it is not terribly good at doing so, and is much better at running applications written specifically for its environment.

DESQview "awareness"

There are quite a number of programs which are DESQview "aware". In other words, they can detect (or be told) that they are running under DESQview, and can then modify their behaviour to work better in that environment. The degree of DESQview awareness offered by programs differs enormously from program to program. In some instances, that awareness is no more than the ability to do screen writes to the shadow buffer that DESQview maintains for all its tasks, thus allowing for fast screen updates without problems of bleed-through in DESQview windows.

While this is certainly useful, it is a long way from optimum support for DESQview. The next level of DESQview awareness is the ability to give back CPU time when the program is idle. This is very desirable, but unfortunately, not nearly as common. An application that does this will be much less likely to soak up CPU power when it is essentially sitting doing nothing. Since the code to do this is quite readily available, it seems a great pity that more software authors do not make use of it.

Beyond this stage, there are also programs which will make use of special DESQview abilities if they detect that they are running under DESQview. One very good example of this type of program is the communications program, RBcomm. While RBcomm will operate quite happily under DOS, if it detects the presence of DESQview, it has several features to enhance its operations. First, it will release idle time to the system as a whole, meaning that it will not consume near as much in the way of system resources as other communica-

tions programs will under DESQview. Beyond that, it will also use the internal DESQview inter-task communications facilities. So, for instance, when it has been left to dial a number in a background window, it can communicate the progress of that attempt to the foreground task - when it succeeds in getting a connection, it will pop a small window into the foreground task to let you know that the connection has been established. And, if left transferring a file in the background, it will pop a similar window into the foreground application to let you know when that transfer has completed.

DESQview-specific Programs

Beyond this, there are programs that are DESQview specific (in other words, they will only run under DESQview). There aren't any great number of DESQview specific programs, and the majority of those that do exist are either Shareware or Freeware. The only commercial DESQview specific programs that I'm aware of are the Quarterdeck DESQview Companions (which consist of a WordStar compatible ASCII editor, a calculator and a communications program, and are nothing terribly special in any event).

Amongst the shareware DESQview specific programs, **DVTree** (a file management utility), **LTFORMAT** (a floppy disk formatting utility), **DVTMAN** (already mentioned) are good examples of programs which make maximum use of the abilities of DESQview, and in so doing, work efficiently to make a PC a more productive and pleasant machine to use with DESQview.

Distribution network

There is an amateur network dedicated to the distribution of DESQview related and specific programs. DVnet has been in existed for quite sometime, and member bulletin boards can provide a wide selection of DESQview related files. I'm not going to even attempt to cover the full range of such files, but I will now provide a short list of DESQview related programs that I consider to be essential for making maximum use of DESQview. In some cases, there is redundancy in the listings, as the program that may work best on some systems may not be the best for use on others.

The first group of programs might be considered as DESQview enhancements.

They're mainly aimed at making DESQview easier and more convenient to use.

DNANSI.xxx

David Nugent's DV aware ANSI driver - DESQview comes with its own TSR ANSI driver. However, DVANSI is not a very good ANSI driver - it is hardcoded for 25 line operation, is slow and somewhat jerky. DNANSI was derived from the PC-Magazine ANSI.COM, and offers smaller memory usage under DESQview, plus much better screen handling, and the ability to be unloaded.

DV_EDSCR.xxx

Batch file for processing scripts. This allows much easier processing of script files. The batch file, combined with a DESQview script, converts an existing script into a text file and starts your editor with the script file loaded. When you save your modified version and exit from the editor, the batch file converts the text file back to a DESQview script file.

DVAPMN12.xxx

DESQview application menu - a shareware program which allows you to build DESQview sub menus.

DVPTAME.xxx

Limit keyboard polling under DESQview

DVSCRIP1.xxx

DV script writer/editor/converter - this allows you to make use of the DESQview supplied script converting program and an editor of your choice to make script editing easy.

QUPIE.xxx

Background Print Spooler for DV - another print spooler for DESQview use.

PROMPTW#.xxx

Insert DESQview window number into DOS prompt - a tiny utility which will detect the number of the DESQview task and insert it into a DOS prompt - while DESQview itself will provide this information on its window borders when the window is running less than full screen, this can be very useful when you are running in a full screen window - helps you keep track of how many tasks you have running.

TAME261.xxx

Speeds up some multitasking processes - Tame helps overcome some DOS pro-

gram's habit of using far more CPU time than they really need, by releasing time back to the system. It can be difficult to set up properly, and does not work with all programs, but it can help reduce the system load produced by running some programs.

The second group of programs are mainly replacements for the many useful TSR programs that you might use under DOS. As such, they are all DESQview specific programs, and all run in their own small windows.

DVALARM.xxx DESQview specific alarm clock

DVCAL.xxx DESQview calendar - similar to many DOS TSR calendars.

DVCALC.xxx DESQview calculator - a small window calculator.

DVDAYS3.xxx Calendar/day calc program - similar to DVCAL, but a bit more recent and colourful.

DVASCII2.xxx DV ASCII table program - a small window ASCII table display

DVTIME.xxx Time display for DV - a tiny digital time display which runs in 2 K of memory.

The third group of programs are mainly aimed at batch file processing under DESQview, either as alternatives to DOS programs, or as means of using some of DESQview's more advanced features.

CNTDWN.xxx DESQview countdown timer - if you have a need for a utility to set a wait period, most of the DOS based ones tend to have too much effect on other tasks. This one will provide minimal loading of the system while waiting.

CRON12.xxx Unix like event scheduler works under DV - already mentioned, this is a task scheduler, which while it is not DESQview specific is probably of most use under DESQview.

DESQ-RB.xxx Reboot a DESQview window - this is a window definition and script file which allows automatic closing of DESQview tasks and exiting from DESQview.

DESQTEST.xxx Test whether DV is loaded or not - this can be very useful for batch file processing, returning a testable errorlevel if it detects the presence of DESQview.

DVC17.xxx Control DESQview from the command line - this is vital for many DESQview tasks. It provides facilities to allow building sub menus, to start DESQview tasks from the command line, to manipulate DESQview windows in a wide variety of ways.

DVEX0320.xxx Start DV task from a batch file - a utility which allows you to start one DESQview task from within another. Very useful for batch file multi-processing.

DVLOAD.xxx Start DV task from another task - similar to DVC or DVEXEC, but without as many features.

DVTMAN13.xxx automated event manager for DV - DESQview specific task scheduler which allows you to start and stop DESQview tasks at specific times.

ONLY1.xxx Share..prevents running multi pgm copies - this is a DESQview 'shared program' which helps prevent running multiple copies of the same program.

The forth group of programs are DESQview applications of one sort or another. While some are not DESQview specific, they all have special features when used under DESQview, and might be considered less than fully functional if not running under DESQview.

DVPS1.xxx DV print spooler - a very good DESQview specific print spooler which can run in a small (11K) memory window.

DVTREE22.xxx DESQview specific file manager/shell - this provides facilities similar to most DOS file managers, but does so while using minimal system resources, and offering a number of features that are only possible through the use of DESQview.

LTFORMAT.xxx ver 1.20 DV aware floppy disk formatter - a cut-down version of a larger disk formatting program which provides a DESQview specific background floppy disk formatting utility.

MYLESS.xxx Text viewer(+) size scroll to window height - this is a Unix style utility which is especially useful in DESQview, since the number of screen rows that it uses for its display can be set to suit the number of lines in the DESQview window.

RBCOMM33.xxx small DV communications pgm - a highly DESQview aware communications package. RBcomm will run in very small amounts of memory, using DSZ for file transfers, and offering probably the best possible performance under DESQview of any communications program. While it is a little on the basic side, it offers all the facilities that most users will ever need, and has excellent terminal emulations available, as well as a good scripting ability.

The fifth group of files are diagnostic or tuning aids for getting the best performance from DESQview.

BUZY.xxx Utility to set back/foreground ticks in DV

DVDUMP2.xxx Memory dump utility for DESQview

DVMON13.xxx System performance monitor for DV

FILES004.xxx Display table of open files - a DESQview specific diagnostic tool which will run in a DESQview window, displaying the files that are open on the system, with information which can be very useful for tracking down problems.

TAMEAN10.xxx Utility to help tune tame - this is a small utility intended to help set up Tame for optimum use.

Customising DESQview

Having provided you with a list of programs that can be used with DESQview, I should illustrate how some of them can be used, and what they can do.

One thing that is not very customisable about DESQview is its normal menu. Any application that is run direct from DESQview needs to have an entry on the Open window menu that DESQview provides. There is no ability to group related programs in sub-menus, which might tend to make things easier to find, and would certainly reduce the clutter on the main DESQview menu. However, two of the programs mentioned above have the ability to create submenus for the main DESQview menu.

The first one mentioned (**DVAPMN12**) is the most powerful and flexible in terms of its menu generating abilities. It has the ability to create similar menus to the DESQview menu, using customised colours and with optimal prompting for parameters to pass to the program it is about to execute.

The second one (**DVC17**) is not quite as flexible in terms of its ability to create menus, but it does have a number of other abilities that **DVAPMN** doesn't have. While I might quite like to have some of DVAPMN's extended menuing abilities, I find the other abilities that **DVC** has to be more useful, so I use it exclusively.

In either instance, using these programs gives you the ability to remove some items from the DESQview Open Window menu, and group them logically on their own menu. So, for instance, I have a sub-menu of DESQview utilities, which has the entries for things like editing DESQview scripts, a calculator, an ASCII table, and various other small utilities. I also have a second sub-menu which groups BBS related programs and utilities away from the main menu. Doing this, I can keep the main DESQview menu uncluttered

This approach has one disadvantage. The DESQview window definition files that are used for these tasks are no longer on the DESQview menu (yes, I know I was just saying that this was the main advantage of using sub-menus...). The disadvantage is that, if you need to change any of the parameters of those window definition files, you have no choice but to reconfigure the main menu so that the definition that you need to change *is* on the menu, since the only method of making changes to the definition files is through the DESQview 'Change a Program' facility, which will only function on a definition that is tied to a DESQview Open Window menu entry. This is something of a pain - if you find that you need to make changes to an item on a sub-menu, you will need to add it back onto the main menu, use 'Change a Program' to make the necessary changes, then use 'Delete a Program' to remove it from the menu again, then (yes, I know, I did say it was a pain...) rename the xx-PIF.BAK that is produced by running 'Delete a Program' to xx-PIF.DVP so that your submenu can use it.

There is a way around this problem, but it will cost you money. If you register a copy of **DVC**, you will get a stand-alone .DVP editor. Not only is this a better approach than using the 'Change a Program' function from the DESQview menu, but it also allows you to do something that cannot be done with DESQview in its standard

form - move the .DVP files to another location, and use something other than the two-key naming convention that DESQview enforces for all .DVP files that it creates. Given the low cost of registration for DVC, this alone is probably well worth the cost of registration.

Spawning programs

DVC has a number of other features that make it well worth considering as well. I've mentioned how useful it is to be able to start a DESQview task from within another task. DVC has several options to do this. One is the 'spawn' command, another the 'open' command. In addition, it is capable of executing key commands as though they were entered from the DESQview menu. You can use the 'spawn' or 'open' command from the DOS prompt, or from within batch files. To provide one example of this type of use, I'll describe the online help facility that I use on my system.

One feature that is found in most Unix systems is that a lot of information on programs and utilities is available from the system. The 'man' command in most Unix systems allows you to bring up information on the majority of Unix commands. I found myself often wishing that I had some similar ability on my system. Especially when doing something like editing a document in Qedit and finding that I couldn't remember what key command I'd used for the 'insert date' command, and finding that there wasn't sufficient available space to include the command in the inbuilt help system. With the help of DVC, I've built myself a similar function to the Unix 'man' function. Though in some ways, its more powerful than any of the Unix versions I've seen.

First step was to create a task definition for Vern Buerg's LIST.COM. While I use List frequently from DOS, there is nothing to stop me creating a task for it as well. When I created the task definition, I set the 'starting directory' option to point to the directory in which I was going to put all the online documentation that I wanted. I also defined the List window to be less than full screen (in this instance, it is set for a maximum height of 22 lines). I then used the process I've described above to get the window definition off the DESQview Open Window menu. I included it in my utilities sub menu. Thus, when the 'man' selection is taken from the

utility submenu, List is started in its directory listing manner. I can then use the cursor keys to select the document that I want to view, and use List's ability to search for text to find what I need.

However, I have another, more direct way of accessing the same function. I renamed all the document files to 'xxx.man' files, and I have a batch file (called MAN.BAT, naturally) which I can call from any DOS window. This batch file is below:

```
@echo off
desqtest
if not errorlevel 1 goto
        no_dv
if not '%1' == '' goto param
dvc spawn c:\dv\ll
goto end
:No_dv
echo.
echo.
echo.
echo This command ONLY works under
    DESQview.  In case you hadn't
echo noticed, DESQview isn't running!
echo.
echo.
goto end
:Param
 dvc spawn c:\dv\ll * %1.man
:End
```

The initial 'desqtest' command is just in case I forget and try to use the command during one of the rare occasions that I'm not running under DESQview. It would probably not do any harm to leave it out, since DVC would complain and nothing else would happen, but it is tidier.

DVC is then used in one of two modes. In the first instance (if I've not entered something like 'man qedit' to call the specific document that I want), List is started in the same mode that it would be if I'd started it from the sub-menu. In the second instance, I'm making use of DVC's ability to override items that are in the 'parameters' field of the DESQview task definition. DVC can override many of the parameters found in the task definition, but it must do so in a linear fashion, Hence the, * in the second DVC spawn command tells it to ignore the drive and path override which DVC can use, but insert the name contained in the %1 variable (with the addition of the .man extension) to the parameters override. Used this way, I will

be presented with a List task, with the document file I've specified loaded and ready for viewing.

Floppy formatting

I use a similar approach for formatting floppy disks. The DVformat program that is supplied as part of the LTFORMAT package is very good for use under DESQview. It has much less overhead than using the normal DOS format command under DESQview, and being DESQview specific, has the ability to go into the background as soon as it is started, and then pop a small window into the foreground to report completion of the task when the disk is formatted. However, it requires a task definition, and the parameters that are passed to DVformat are part of that definition. So, if you have two floppy disk drives (say a 1.2 meg and a 1.44 meg drive), you have four possible sets of parameters that you need to pass to DVformat. Under DESQview alone, you would need to have four entires on the Open Window menu to cover all four possible format options. Using DVC, you can have only a single task definition, and override the task parameters as you

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start the task. Again, I have both a sub-menu selection for DVformat, and a batch file to do the job. The sub-menu selection is actually 4 selections, but, since its on a submenu, that isn't any great problem. The batch file I use for DVformat is below:

In this instance, as well as having a test for the presence of DESQview, I've also added a brief help screen in case I forget the parameters that need to be passed to DVC to format the correct floppy disk.

The one other thing that should be mentioned is that, if you are going to make use of DVC's ability to override a parameter in the task definition file, there must be a parameter there to override in the first place. It doesn't really matter what that parameter is, but there must be something in that field in the task definition for DVC to be able to override it. ■

```
@echo off
desqtest
if not errorlevel 1 goto no_dv
if '%1' == '' goto twit dvc spawn c:\dv\df * %1 goto end
:Twit
echo.
echo.
echo.
echo    You didn't provide the operational parameters, idiot.
echo    Options are as follows:
echo.
echo fm a2 - Format a 360K disk in Drive A:
echo fm a3 - Format a 1.2 meg disk in Drive A:
echo fm b5 - Format a 720K disk in Drive B:
echo fm b6 - Format a 1.44 meg disk in Drive B:
echo.
echo Now try and do it right.... .
goto end
:No_dv
echo.
echo. echo.
echo This command ONLY works under DESQview.  In case you
          hadn't echo noticed, DESQview isn't running!
echo.
echo.
:End
```

NEC CDR-74 CD-ROM Reader

by Ash Nallawalla

NEC is well-known for its range of electronics products. Most of us are familiar with the MultiSync range of monitors; some of us use NEC PCs or laptops; so it is no surprise that NEC has been making CD-ROM readers (drives) for some time. I took a look at the CDR-74, a desktop device that is powered from the 240 VAC mains but its operational features are shared by an internal model called the CDR-84, which fits in an accessible half-height bay inside your PC.

Description

The CDR-74 can be mounted flat or on its side. It is a SCSI (Small Systems Computer Interface) device. I used the NEC SCSI interface kit, which is a rebadged Trantor unit, but I could have used some others instead. SCSI in simple terms gives you the ability to connect up to seven SCSI devices in a "daisy chain" manner while taking up only one slot in the PC. Other SCSI devices can be tape drives, hard drives or more CD-ROM readers. Note that other brand SCSI interface cards may not come with the requisite driver software.

It is one of the fastest readers on the market, with a 280 millisecond access time (others are at the 800 millisecond end), 3(•) kB data transfer rate, and a 64 kB cache. The data transfer rate is achieved by NEC's 'MultiSpin' technology. It comes with a manual, cartridge ('caddy'), and a vertical mounting kit. The literature claims that it is MPC compliant for multimedia applications and is 'XA-ready.' The reader is compatible with IBM or clone PCs, ATs and Macintosh.

The MultiSpin features let the disc spin at variable speeds depending on the type of data being read and the amount of error correction needed. At most times it spins at twice the usual speed. It becomes noticeable with large, multimedia files, which are buffered better than previous models, which used to give choppy animation.

Cautions

Installing any CD-ROM reader can cause some a problem, not confined to this brand or model. You may have to detune your PC to make the reader compatible. Some PCs will not be compatible at Turbo settings. With DOS 5.0 you will need to exclude the SCSI card's memory space from the memory manager. Some nonstandard 16-bit video cards might need to run in their 8-bit mode. Some PCs might need to have their shadow RAM and all caching disabled. I didn't have any such problem with the CD-ROM reader but it helped to solve another. (I found I had left my bus mouse jumpers at the wrong setting.) A minor inconvenience is that if the reader is not switched on then the PC's boot-up sequence is paused until I press the Enter key.

In Use

Installing the SCSI adapter card was very easy. The Microsoft CD extensions (MSCDEX) and the NEC driver were the latest, so I had no problems with them.

The reader has an additional dust flap so you need two hands to insert a CD-ROM. The three controls are on the front panel, which is another plus.

The reader became Drive "E" on my PC because my last drive was "D." Other than that it is accessed just like a conventional disk. You can use all nondestructive DOS disk commands with it. For example, you can use Norton Desktop and browse through its contents; install CorelDRAW! from it; run a knowledge base on it using some components that lie on your hard disk, and the like.

Reading Photo-CDs

Kodak offers a service where one can take one's slides and negatives to a bureau and have them transferred to a special CD-ROM called a Photo-CD. I don't have one to test but on Usenet there have been a few messages claiming that the CDR-74 will not read them. Some of these people had existing, non-NEC SCSI cards and the problem seems to lie there. The Adaptec 1542B card is one of these.

Then there have been replies pointing out that the CDR-74 will indeed read Photo-CDs. Some users who had the CorelSCSI card said that the /XA switch in its driver must be set. A person from the Philips Consumer Electronics headquarters in Eindhoven, Holland gave a definitive answer: the problem
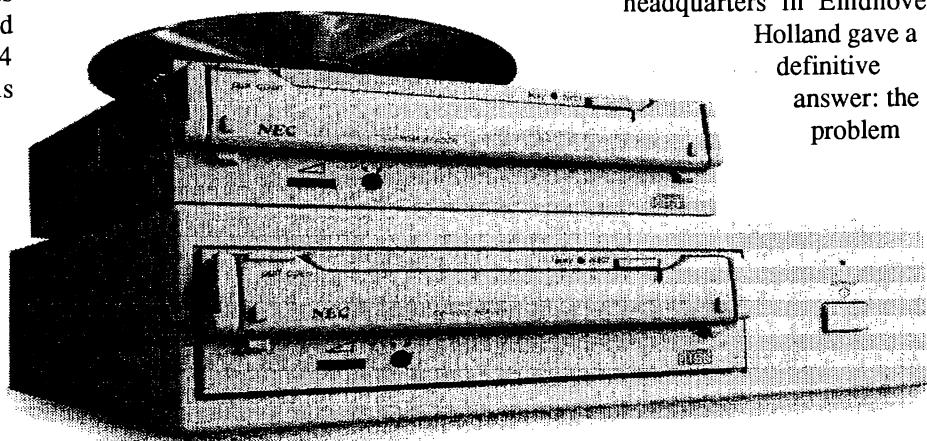
The NEC CDR-74 CD-ROM Drive (bottom) and CDR-84 (top)

really lies with Microsoft's MSCDEX (the CD-ROM extensions for DOS). It does not have XA capabilities yet. Readers will need to have firmware changes—it is not a hardware problem—to read multisession CD-ROMs.

He added, "The CDR-74 indeed is a single session device. It can read multisession (multivolume, or hybrid) discs, but only the first validated ('fixated') session. I tried reading blocks beyond the first lead-out area on a multisession CD (written by the Philips CDD 521) and it wouldn't do that. The problem is that a Photo-CD is a CD-ROM-XA. A CD-ROM-XA contains mode 2 blocks instead of mode 1 blocks as on normal yellow-book CD-ROMs. The NEC CDR-74 (I use a CDR-84, an internal version of the CDR-74) can read mode 2 blocks ('raw blocks') and I wrote a program to read the directory of a Photo-CD, talking directly to the device driver, i.e. bypassing MSCDEX. That worked perfectly. The problem is MSCDEX, which doesn't support CD-ROM-XA discs, asks for mode 1 blocks and runs amok when getting error messages from the device driver when it finds mode 2 blocks."

Plays Audio CDs Too

You may wonder why one would want audio CD playing facilities on a CD-ROM drive. So did I, until I tried it. The CDR-74 has a headphone socket and volume control on the front panel and a DOS-based Music Box utility that gives you the same controls that a CD player does. A set of stereo earphones is supplied.

My PC is not near my conventional CD player, so my CDs rarely get used. Music Box can be run in memory-resident mode, so I now listen to CDs while I type away. The audio is quite clean and loud enough for me. You may prefer to hook up a stereo amplifier to the CDR-74 through the audio jacks provided on the rear panel.

Availability

Phone NEC Home Electronics (07) 277-0888 for the name of your nearest dealer. The NEC CDR-74 has a RRP of $1169 and the SCSI Interface Kit retails for $263. The CDR-84 is $1054 and the CDR-37 is $768. Street prices are usually lower and/or you often get a few CD-ROMs thrown in.

Conclusion

The NEC CDR-74 reader is a fast, well-engineered, reliable device. I have used it for a month at this point with no problems. Several friends have the same or related NEC readers and they have not reported any problems with them either. You pay a bit more for a fast reader, particularly if you intend to play with multimedia. The cheaper, slower drives might be fine for installing software onto your hard disk but they are quite a pain for using software that needs to access the CD-ROM frequently. I recommend the CDR-74 to you.

Woops, durn, damn!!

CORRECTION

Last month's issue of "Significant Bits" carried a review of CorelDraw Version 3.0A by Ralph de Vries on pages 45-46.

Associate Editor, Ash Nallawalla rightly points out that the "bugs" Ralph identified and complained about in Version 3.0A have been fixed in Version 3.0B, which was the version Ash reviewed in the September issue.

Confused??

Well, the current version is 3.0B-A, which none of us have.

We apologise for any confusion we caused.

Editors note.

Corel Systems supplied my "bug-fix" version 3.0B free of charge and unsolicited to replace Version 3.0A which I bought. It's a great program, used to considerable extent in producing "SigBits" and my advertisements.
Ron

Telephone Help Dangers

At one time or another, we've all been asked to talk a remote friend through a problem ... it's the most difficult favour in the world if you haven't got the problem program on your machine to run in parallel, or one of those remote control programs like PC Anywhere on both machines. The problem sounded simple enough when explained to me:

A user had been talked through a minor modification to the CONFIG.SYS file to avoid automatically running the menu program on start-up. Only horrors!! On reboot, the computer emitted series of "whoops", generated pages of "ERROR IN CONFIG.SYS FILE" messages, then hung.

Worse was still to come ... it was a minor mod, so she didn't think a bootable floppy would be required, so didn't make one. Now she was stuck!

Enter Mr Fixit, armed with trusty boot floppy. The machine started and ran normally, so time to investigate the CONFIG file. A quick "Type CONFIG.SYS|MORE" gave two pages of quickly scrolling garbage, embedded in which you could read what would be normal statements for a configuration file.

What the hell???

Then the penny dropped! Both the owner and the helper are expert word processors. They had, naturally used WordPerfect to edit the file and saved it normally (for WP). This meant WP added its header rubbish and saved it in its proprietory compressed format. Unfortunately computers only understand straight ASCII in their CONFIG files.

So remember, if you use (any) word processor, save the result as an ASCII file (or use EDLIN).

The OS/2

Column   with Paul Marwick

This time round, I intend to review a few more OS/2 programs. There is a very long list of such software to review, so I'm intending to concentrate on the proggrams that I've used and found most useful.

4OS2 v1.0

Most people who have used the DOS command line will have at least heard of 4DOS, the replacement command shell for DOS. 4OS2 is also a product of JP Software, and offers similar facilties for the OS/2 command line user. As with 4DOS, it is intended to provide enhancements to the facilities provided by CMD.EXE (the OS/2 command shell).

The enhancements provided cover a number of different areas. They include extentions to batch file processing, aliases, a smarter commandl line history, and a number of other enhancements.

Generally, 4OS2 does what it is supposed to. The command line history is considerably smarter than the "keys" facility provided by CMD.EXE. Not only is it configurable in terms of the number of commands saved, it is also configurable in terms of the number of characters that a command must have before it is saved. It also has a pop-up window available, which allows the command history to be reviewed, and an individual command selected without having to scroll up or down from the command line. In addition, it can be configured to be either local to an individual session, or shared across multiple OS/2 tasks.

The 4OS2 alias faciltiy allows multiple commands to be combined and executed with a single keystroke. As with the 4DOS alias facility, a very useful extention to normal command line facilities (for instance, I have a simple alias defined that I use a great deal - "go", which executes the following commands: cd\ & cdd %1. This allows me to move rapidly from one drive/directory to another).

Batch file enhancements provided by 4OS2 are extensive. There are a number of inbuilt variables which can be used for batch file processing, and 4OS2 also understands the .BTM extention used by 4DOS for "batch to memory" mode (which allows a single file to be shared between OS/2 and OS/2-DOS sessions, since there are several tests which can be performed to check which environment the .btm file is running under). In addition, 4OS2 is capable of making use of REXX, the OS/2 procedural language. While REXX is not included in 4OS2, it is capable of starting the REXX interpreter when needed.

4OS2 comes with extensive online help. This is in a similar form to the hypertext online help provided with OS/2 itself, and is reachable either from the Information folder, or by pressing the F1 key from an individual session.

While 4OS2 provides excellent extentions to the normal services provided by CMD.EXE, like its DOS counterpart, it has a few peculiarities. Whether these are due to bugs in OS/2 or bugs in 4OS2 is open to debate, but there are several things which will function under CMD.EXE which do not work correctly under 4OS2. For instance, several REXX time or date related commands do not function at all under 4OS2. In addition, a very useful program by Mark Kimes (DELAY) is only partially functional under 4OS2. While the primary "delay x seconds" function works, a number of the extentions to this command (exit with an errorlevel depending on the day of the week, month of the year, or the results of a time filter) do not function at all.

Overall, an excellent extention for anyone who uses the command line in OS/2. But some caution must be exercised regarding things that do not function under 4OS2.

TE/2

One area where there is currently a limited range of options for OS/2 is in communications software. OS/2 comes with its own terminal emulation software, but few people who make much use of modems are likely to want to make use of it.. And, while there are a few other communications packages available, the range is very limited by the standards of the DOS world.

TE/2 is a full-featured communications package. It provides an interface that is similar to the DOS Telix, and provides a similar range of features (though the script capability is disabled in the unregistered version).

Most of the operational settings for TE/2 are stored in a flat ASCII .INI file. These can be edited with any text editor. For ease of use, modem set-up information is stored in a second text file, with an "include" command calling it from the main .INI file. Settings such as the type of flow control to be used, modem initialisation strings and terminal settings are all stored in these two files.

The TE/2 dialling directory works much like the facility provided by Telix. Entries can be edited from within the dialing directory, and multiple dialing options can be set from the same place.

TE/2 can be extensively customised for such things as colours used in terminal mode and modem settings. It supports Zmodem, Xmodem, Xmodem-1K, Ymodem and Ymodem-G file transfer protocols.

In use, it is an effective communications package. Frommy experience, it is best run in full screen mode rather than in a window, as one of

YO, DOS!
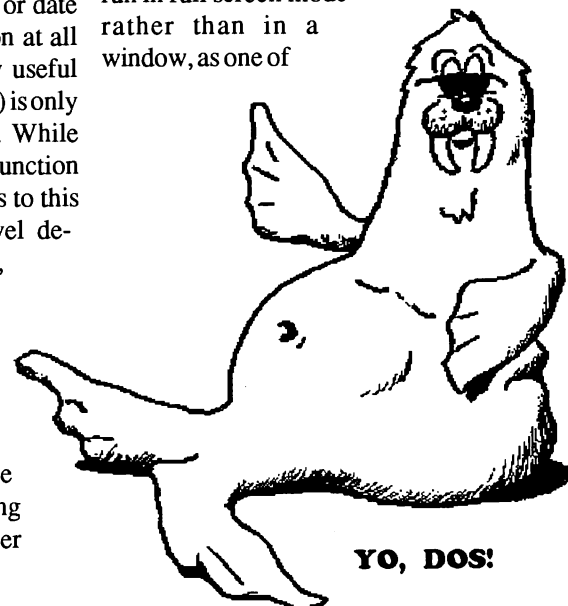
its failings is rather slow screen writing. Some people have also had problems with it locking when other tasks interfere with its ability to control the system. This seems to be an intermitent problem, and isn't one which all users have experienced.

Customising OS/2

OS/2's GUI offers almost limitless potential for customising to suit individual tastes, both in terms of its appearance, and in terms of its functionality.

In terms of the appearance of the WPS, there are large numbers of customised icons which can be used. Many of these have been converted from Windows icons (and there is a program available which will allow Windows icons to be converted to OS/2 format). These can be loaded both for existing OS/2 folders and programs, and also for newly created folders and program objects. The process of loading them is simple, though a little convoluted...

First, place the icons you wish to use or examine in a convinient directory. Don't put too many in that directory at one time - if you load a directory with a large number of icons, it can take some time for them to appear...

To install a new icon for any object on the OS/2 desktop, click on the object with the right mouse button. From the menu that appears, select OPEN, with the mouse pointer on the arrow at the right of that selection. This will produce a second menu. Take the SETTINGS option from that menu. From the settings notebook, take the GENERAL option, which will present you with a picture of the icon currently associated with the object, and another menu. From this menu, select the FIND option. From the FIND menu, select the LOCATE option. Then select PATH and enter the path to the directory which contains yyour new icons. Click on Ok, then click on FIND. You will be presented with a viewing box which will allow you to see what the icons look like, and to select the icon you wish to use. Once you have selected an icon, click on Ok again, and that icon will be attatched to your object.

Sounds complicated, but isn't really once you try it. Once you have an icon associated with your object, you can customise it further by editing the icon, using the EDIT option from the GENERAL page of the settings notebook. Hours of fun can be obtained this way... ∎

BBS NEWS

BBS Availability
Paul Marwick

All three lines have several periods when they are NOT available for human use. These times include maintenance periods, plus periods when mail is exchanged with other systems.

While these time periods have been clearly listed on the systems for a long time, it appears that many people have never bothered to find out what those times are. The number of incoming calls at times when the systems will NOT accept human access has increased to a ridiculous degree.

As a result, the times when the systems are not available for human use are listed below. If the level of calls during those periods continue, it will have the direct effect of making the systems unavailable for human use for a considerably longer time than currently applies.

All three systems have a maintenance period at midnight. This normally runs for around 15 minutes. During this time, human use is not permitted. In addition, anyone calling just before this time will be thrown off so that the maintenance can take place on schedule.

Line 1 and Line 3 make outgoing mail calls immediately after maintenance is completed. Again, human use is NOT permitted during this period. While the period may vary, depending on when mail calls are completed, it can run for up to an hour on either system.

All three systems are unavailable for human use during the Fidonet Zone Mail Hour, which runs from 4 am to 5 am. This is a basic requirement of being part of Fidonet.

Line 3 makes further outgoing mail calls from 5 am until 6:30 am. Human use is not permitted during this period.

Line 3 also makes outgoing mail calls starting at 10pm. If the mail is picked up quickly, this period ends immediately. If not, it extends until 10:30 am, and may result in reduced on-line time for callers after that time if the mail has not been picked up during that period.

Overall, the systems are unavailable for BBS use for less than 15% of any 24 hour period. However, if the degree of interference with their performing their other functions continues, this level of availability will decrease significantly. ∎

A Review of a Windows Top-end Graphics package

ARTS & LETTERS

by Brian Bere-Streeter

In the world of Windows Top-end Graphics packages, since this type of software established itself as a separate category, the de-facto standard has become Corel Draw, by simple fact of being one of the first software packages in this area. In recent times a number of competitors have sprung up to challenge the position held by this package. Among them has been Micrografx Designer, Harvard Draw and Aldus Freehand.

But there is a new competitor on the starting blocks, Arts & Letters by Computer Support Corporation, and distributed by Alkira Australia. Although Arts & Letters is relatively new to the Windows environment, it is also available in versions for OS/2 and UNIX with Sun and DEC workstations, and so has an established multi-platform pedigree, which some of the other competitors lack.

There are four levels of sophistication supported by the Windows version of Arts & Letters. At the budget end is Arts & Letters Picture Wizard at around $160, in the intermediate levels, Arts & Letters Apprentice at around $270, Arts & Letters Composer at around $570 and the Top-end package, Arts & Letters Graphic Editor at around $850. This review will only look at the full Top-end package, and a copy has been generously made available to us for review, courtesy of Alkira Australia.

I have never had the experience of using any of these Top-end graphics packages, so as a reviewer I do not have any pre-conceived ideas of what a graphics package should or should not do. Therefore, I will be specifically looking for the points that make a package easy to use and learn for the first-timer. By way of comparison of any performance features mentioned in this review, the review is run on a 386DX-25 with 4MB of RAM and an 100MB 13ms IDE hard drive (Stac'ed to 200MB) under Windows 3.1 and Norton Desktop version 2.0.

The package comes in an attractive robust slip-case box, containing Graphics Editor User's Guide, Graphics Editor Tutorials and Techniques, Decipher User's Guide, Clip Art Handbook and a Colour Palette Guide. Also in the package are 13 high density 1.44MB disks, comprising the Install disk, 8 clip art disks, 2 fonts disks, a graphics editor activities disk and the Decipher disk. Decipher is a Utility module for converting PostScript and Bitmap images for use with Arts & Letters.

INSTALLATION

Installation takes about 25 minutes to transfer the software from diskette to your hard disk, and the only user option on the Installation Screen, is to install or not install Decipher. Also whilst there is provision to display the total disk space required, for some reason this section of the installation screen was left blank, and so I was flying blind to the amount of space needed on my hard drive. As luck would have it, by the second fonts disk, the dreaded message "disk full" raised it's ugly head. So I terminated the install routine, deleted about 3MB of rarely used "junk", and tried again.
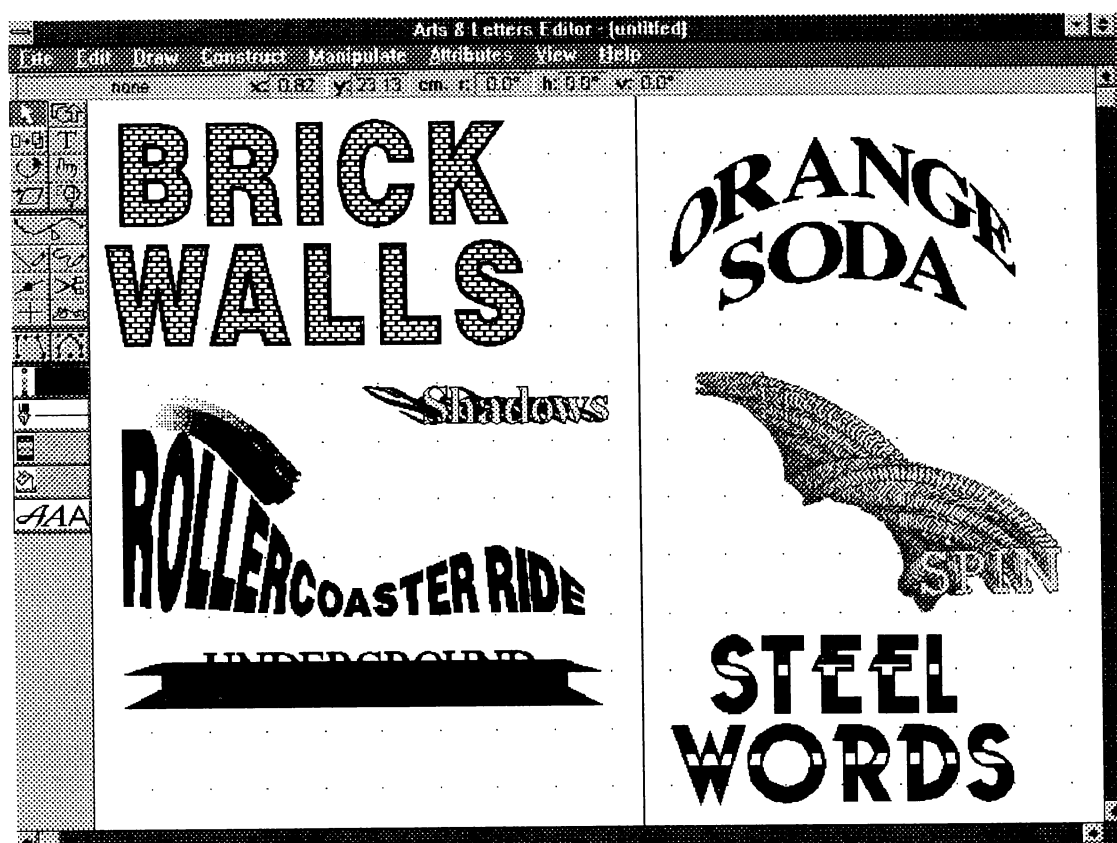
Some very interesting font and fill effects can be added to your copy to reinforce the message being conveyed
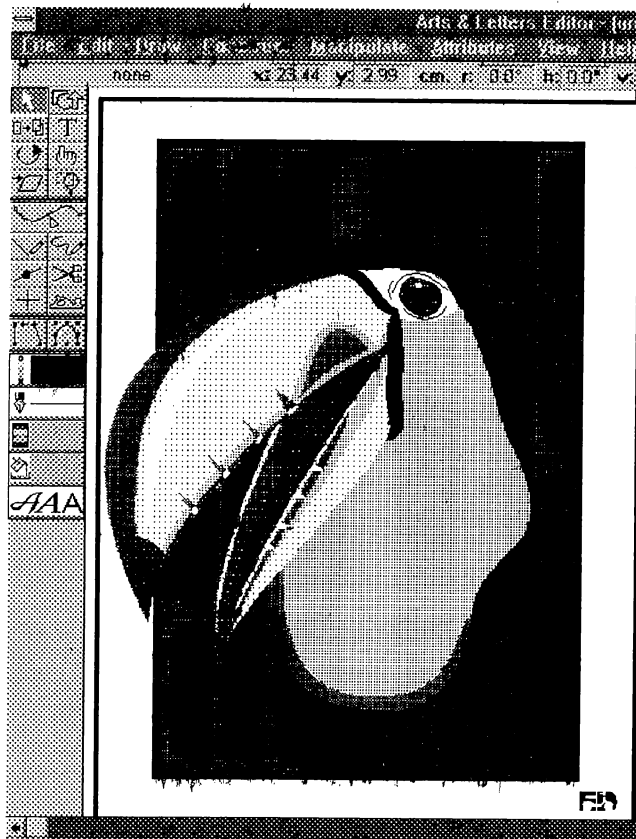
Figure 2. An extensive range of graphic manipulation tools is available
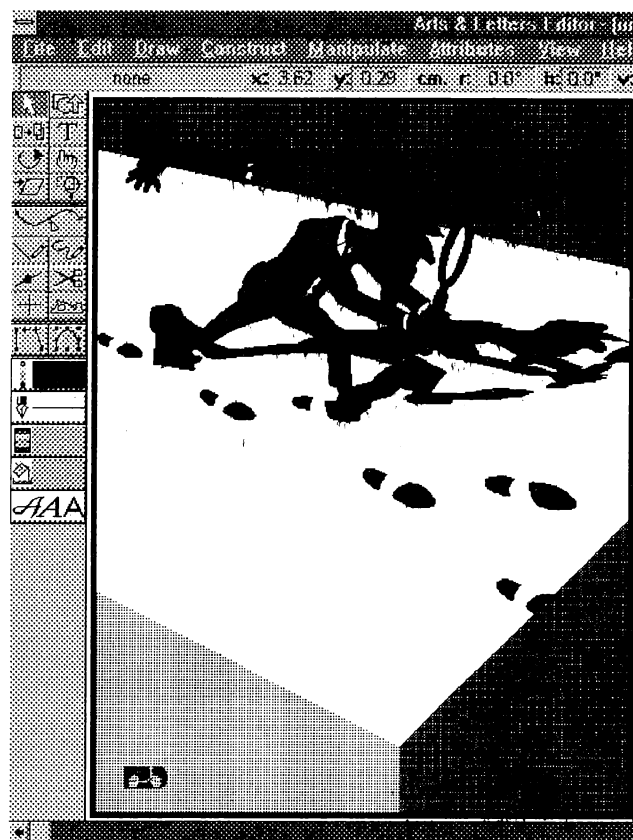
When most software packages have install problems, and you need to start over, you go through the whole time consuming process again. So I was pleasantly surprised at the end of the install disk, where it asked for the clip art disk No.1, to see in the dialogue box, an entry saying "skip this disk". So by quickly skipping eight clip art disks and one fonts disk, I went straight to the disk where the problem occurred, and saved about fifteen minutes on the re-installation time. I wish other software had this feature, instead of laboriously re-copying all the files which are on the hard disk already.

The full package consumes 22MB of hard disk space, including 12.6MB of clip art set in 65 libraries and 2.7MB of fonts in 90 files, and overall installs more than 280 files on your system. This compares favourably with other packages that require 30 to 40 MB, and in fact, in some cases, also require an expensive, slow CD-ROM drive. This is fine if you already have a CD-ROM drive, but the cost of 22MB of space on my hard disk is considerably cheaper than a CD-ROM drive.

TUTORIAL

There is an excellent Tutorials and Techniques Handbook, which is easy to follow, and gets you started in the basics fairly quickly. Also under the Draw menu, there is an Activities Manager, and under that, a series of Tutorial files on disk, which step you through other functions of the software and suggest other techniques. So half a day or so invested in working through these tutorials, will get you working comfortably and productively with the software. You can then progress onto the more advanced features of the software as you need them. All in all, learning on this software, is relatively easy.

FEATURES

The set of graphic manipulation tools is very extensive, in keeping with the high-end position of this package. It is so extensive, that it is difficult to describe all the different effects you can create without taking up the whole of this magazine. However some of the more interesting features are, aligning and blending objects,

editing charts, copying attributes and drawing shapes, gradient fills, joining objects, cutting holes and masks, drop shadow effects, shape text to fit a line or curve, warp text and objects, and the ability to trace bit-map images into vector graphics that can then be scaled.

Learning to use all of these features will certainly take time, but in the end you have access to one of the most well equipped graphics toolboxes available.

FONTS

There is a good selection of 90 fonts supplied with the software, however some of them look very similar. The font names are unique to Arts & Letters, but there is a cross-reference in the manuals to other common proprietary font names, and there is a facility to rename fonts if you require to maintain compatibility with other systems.

Fonts are identified with a name and a number, so if you wish to delete similar

fonts to conserve disk space, for example, to delete font Diploma #40, delete file DFONT40.ALL from the typefaces sub-directory. Next time you call up the fonts from Attributes, Type, you will see that font Diploma #40 is no longer listed. It may be better to copy the unwanted fonts to diskette, so if you need them later on, you can re-copy them to the hard disk rather than having to run the install program again.

You can also load other fonts supported by your windows printer, such as TrueType, Adobe Type Manager and Bitstream, and can still scale them as well as bold and italic. The Arts & Letters fonts can be used in various fancy formatting styles, but this requires that they be converted to freeform format before manipulation. However I found with TrueType fonts that they cannot be converted to freeform and therefore formatted to fancy styles like Warp or shape to curve, etc. So if you need to use fancy text manipulation in graphics as

well as all your normal text fonts for word processing, etc., this requires that you maintain two sets of fonts on the hard disk, all your normal fonts like TrueType and all your Arts & Letters fonts, and of course this takes up considerably more valuable hard disk real estate.

CLIP-ART

The package comes with around 8000 items of high-quality Clip-art (5000 in line and single colour, and 3000 in full colour), and there are many more available from the supplier. Apart from the Corel Draw CD-ROM, this is probably the largest library of Clip-art supplied with any of the high-end drawing packages. The quality of the artwork is excellent with realistic colouring and with such an extensive range, there is something of interest for everybody and for every occasion. I use the 800 x 600 - 256 colour mode in Windows, and in conjunction with an Epson 24-pin colour dot matrix printer, the images are printed in realistic colouring to closely approximate the screen colours (some of my other software, while claiming to be 256 colour aware, will only print in about 16 colours without the nice colour spread I get from Arts & Letters).

One of the highlights, is an absolutely superb collection of Aircraft images, the best I have seen (equal to those on the Corel Draw CD-ROM), and the handbook tells me another couple of hundred are available in optional libraries. If you are an aircraft enthusiast, forget all the competing packages, this is the one for you.

Another pleasant surprise, not mentioned in the clip-art handbook, but particularly of interest to me, are several disk files of good quality Christian images and symbols, that I can use in my role as Editor of the newsletter of The Queensland Baptist User Group.

While all of the Arts & Letters graphic images are in their own proprietary format, the software can read TIF, WMF, PIC, SYLK, DIF, ASCII, (and via Decipher, PCX, GIF, TARGA, BMP and Postscript) and write EPS, CGM, TIF, WMF, (and via Decipher, PCX,
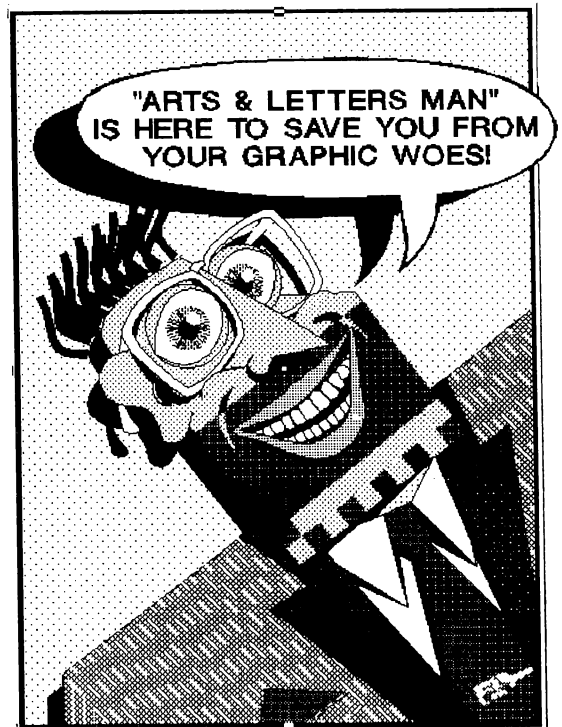
GIF, TARGA and BMP).

The Clip-art is accessed by two methods, a Clip-art Manager and "add a symbol" under the Draw menu.

The Clip-art Manager is very good, and organises the full colour symbols into separate libraries of similar subjects. Provision is made for you to save your own

The Clip-Art Manager is very good ... but ... deleteing an unwanted library is practically impossible

artwork in your own custom libraries and access them from the Clip-art Manager via another module called Library Manager.

Placing an image is simple, select Draw, Clip-art Manager and a window opens, select the library from the left scroll box, and the image from the right scroll box, click on Add or simply double click the image name. Move the positioning symbol to top left and click and the image appears on-screen, ready to re-size, reposition or whatever you want to do with it. A serious omission in this release is lack of a preview

mode, you don't see the graphic until it is placed on the page, and if it is not the one you want, Edit, Cut and try again.

If you need to use a graphic created in Arts & Letters or even some of the superb clip-art in other windows applications, you will need to open Arts & Letters and copy to the clipboard, then paste into the other application. Alternatively export the image in another format, then import that back into the other program.

One of the other problems is that Clip-art Manager refers to each colour image by name only, while the Clip-art Handbook shows the single colour images identified by number only and it gets difficult to correlate the image you want.

The second method of accessing the line and single colour images, is via a command Draw, Symbol, which opens a window and requests an image number. When you type in the number and click on OK, the image is placed on the page similarly to the Clip-art Manager, but the difference here is that the image is rendered only in the default cyan colour with black line

outlines. This allows you to edit the image to other forms without having to change all of the separate colours, particularly if you only want to print a greyed image to a standard black and white printer.

Like most other packages the clip-art range is very extensive, and like most people a lot of the art is not of interest to you, so the thoughts turn to deleting unwanted images to free-up hard disk space. However the library files are numbered with an unidentified numerical code, which you can't seen to link to a library name in the Clip-art Manager. This makes it nearly impossible to delete unwanted libraries from the hard disk, it is basically an all or nothing-at-all approach. Maybe this will be addressed in a later update.

SUMMARY

Summarising, I think this a good package. If you are even slightly thinking about Corel Draw, I would suggest that you at least have a close look at Arts & Letters Graphic Editor, before you part with your dollars. If you want to take your Arts &

Letters skills to an even higher level, Bantam Books produces "The Official Arts & Letters Handbook". This is not like most other computer books just being a revamp of the manuals, but an interesting handbook showing advanced uses, techniques and design ideas for some of the more elaborate graphic functions. It also comes with a further Clip-art library of an extra 100 or so coloured graphics for business uses.

As I said in the introduction, I started the review without pre-conceived ideas of what Arts & Letters could do, and I have been pleasantly surprised by it's extensive graphic creation capabilities.

Using a package like this will not make you into a graphics maestro overnight, but if you have the flair, you are limited only by your imagination. It's like learning how to drive, showing you all the controls will not make you a good driver, you have to get in and drive and continue driving till your skills are honed to a fine edge.

So it is with Arts & Letters !

∎

Problems of success

Junior Club Future Uncertain

The future of the Junior SIG is currently being re-assessed. The review was prompted by the difficulties facing JSIG organiser, Les Cathcart in obtaining help from senior club members to conduct activities and maintain acceptable behaviour in the group.

Les's job has been made more difficult be a small proportion of parents who, either due to the enthusiasm of their off-spring, or a desire to use Brisbug as a baby-sitter, have been delivering kids hours earlier than the 12:00 noon start time, and leaving them well beyond the 3:00 finish time. All parents will appreciate the good job Les does keeping the kids challenged and happy for three hours ... twice that time is an impossible job.

Add to that helper, Cam Krook's, unavoidable absence interstate on business, and you can appreciate the additional load placed on Les. A small number of the children have been misbehaving, adversely

affecting everyones' enjoyment. One has already been asked not to come to Brisbug because of his disruptive behaviour, and others may follow.

The value of JSIG is obvious, with an increase in numbers every meeting. The group is now so big that it needs to be

If more helpers cannot be found, the Junior Club will disappear in the near future ...

President Ron

split into two, based on computing ability, but that cannot occur at current supervisor numbers.

We are interested to note many more parents attending meetings of the junior

group, and expressing appreciation for the opportunity for "hands-on" tutoring at a simple level. We want to encourage this, without over-working Les to the point of quitting through exhaustion.

With this in mind, we want to remind all involved:

1) the hours of JSIG are 12:00 - 3:00pm. Don't come early, and arrange your lift so you don't have to hang around (or got to a SIG that interests you)

2) misbehaviour will be rewarded by banishment.

3) Parents are welcome to attend and join in for the hour 12:00 - 1:00pm. If there is enough interest, we will try to organise a tutor group, probably in the morning sessions.

4) if more seniors do not volunteer to help, JSIG will probably disappear in the near future. ∎

Gold Coast SIG

A SPECIAL INTEREST GROUP (SIG) OF BRISBUG

EACH SECOND WEDNESDAY AT

BURLEIGH WATERS COMMUNITY CENTRE

CHRISTINE AVENUE

BURLEIGH WATERS

Meeting times 7.00 p.m. - 10.00 p.m.

Future Meeting Dates

Date	Presenter	Notes
Nov 18	Bill Harder	Club member Bill Harder will discuss programming and various programs that he has written.
Dec 2	John Bedford	John is another Club member and he will discuss his special interest in genealogy programs.
Dec 16	Xmas Party	Our Xmas Party will be held at the Lone Star Tavern, Markeri Street, Mermaid Waters, commencing at 7.30 p.m. All partners are most cordially invited and are most welcome.
Dec 30	No meeting	System recovery.
Jan 13	Col Davidson	Col will discuss utility programs
Jan 27	John Ellis	CD-ROMs

Standard meeting format:

7.00	Opening of meeting.	Greeting of new members and visitors
7.15	Main Presentation.	Questions to Presenter
9.00	Break for coffee	
9.15	Members Problem Session	Shareware swap and chat
10.00	Close	

ENQUIRIES TO: Carl Planting   Tel   (075) 930 577

Windows SIG

The October meeting of the Windows SIG was devoted to an interactive question and answer session. Peter Akers and yours truly both came armed with portable PCs loaded with a good selection of Windows software, and wherever possible, users' questions were answered by demonstration. A number of lively discussions were a feature of the day. Thank you, Peter.

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

Don't forget the Experienced Windows Users' Sub-Group meeting 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!
Contact: Bernard Speight 349 6677

Southside SIG

We met on the 6th October at Rex Ramsey's residence with 15 members in attendance. Two programs were demonstrated :- XTREE for Windows and DESIGN CAD 2.

XTREE preformed well with a good user interface and although slower than XTREE GOLD for DOS was far superior than File Manager for windows 3.1. An overall good product and a boon to windows users.

DESIGN CAD 2, a middle order computer aided design program, worked well in drawing and printing Rexs' house layout . A good and affordable entry level CAD program.

Gary Mcmin gave a demo of ray traced images using the shareware programe VIVID2. Very impressive.

A discussion of the concepts of "Shareware,Freeware and Public Domain" software was had and was most well recieved, especialy by our newer members. Positive experiences of pur-

chasing shareware software from the USA were had by members with programs arriving promply, (14 days) combined with the latest version made this method of obtaining programs most attractive.

The pros and cons of internal verses external fax modems was discussed at length and a short session on Brisbug's bulletin board completed the night.

Next meeting on 3rd November 1992 at:-
    Paul Kelly-Taylor 8 Portia St. Kingston
    Phone 2080745 A/H
    Subject: Fax modems

December meeting on 1st December
    Linton Holroyd (Sig convenor)
    22 Gardenvale St. Holland Park
    Phone 3433705

Pascal SIG

During the September meeting a Pascal SIG was formed and several members then met again at the October meeting. The main topics of the day were, problems with Object Oriented Programming, also problems with Turbo Pascal for Windows And Turbo Vision.

All aspects of Pascal Programming are open for discussion and all interested members are invited to join us and give their input.

At the next meeting , one of the members will be demonstrating a mechanical interface using Pascal Programming. So, if any one is intrested in this or any other Pascal topic please come along to the next meeting and share your thoughs.
Steve Cann 07 245 4453

Northside SIG

Well we Had another interesting evening discussing all sorts of things most 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 only things we discussed related to computers was how to use batch files to save space in the path statement, and some problems related to computers and generators, all of the remaining subjects

were not really related to computers but were of great interest. A few problems were also solved.

The December meeting has been changed and so is the location as we will be having our own Christmas party, and we will need to know those who will be going as we will have enough food and drink to supply all who will be present and if you go away hungry then it will be your fault, and yes there is a cost to attend. You didn't think we were that generous did you?

Numbers may be restricted as there will only be so much room to fit all in and we do not want to leave any one out in the heat of the night.

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 23rd of this month. This is 8 days after the 15th.

If you have some problem and would like a one on one help then you should come along.
Robert Gurney 07-355-4982

Genealogy SIG

This month I have organized a trip to the John Oxley State Library for Thursday 21 November between 6 and 8 pm. I suggest that you bring a portable tape recorder along as we move at such a pace and I do not think you will be able to take it all in. The last time we went there I ended up with a headache from information overload. This visit is free except for your transport to and from.

On the following Saturday the Qld Library is holding a workshop from 12 to 5 pm. The charge for this workshop is $10 and the main subject matter is the new tools at the library for those who are interested in family history. Afternoon tea is also included in the fee. For more information on that event contact Shirley McCorkindale on 840-7775 and mention that you are a Brisbug member or a friend of one.

And NOW THE BIG NEWS, for those who are using Personal Ancestral File (PAF)... In the latter part of next year you

will be able to use the computer at the Latter-Day Saints reference library in and around Brisbane and at other centers to enter your ancestral file created by PAF. The computer will check your data in front of you for possible matches and links. This is a world wide system and at present the data is stored on 80 CD ROM disks for one set. Bookings for use of the computer will be necessary as members of the Church will have first preference for use of the machine, which is only fair .as it is theirs, and the disks are not for sale to individuals.

The cost for the above will be minimal if any charge at all, but considering the IGI information and other information that is in the disks and the speed that it is done in, then you will be able to appreciate the time wait.

This new program is fantastic! Yep you guessed right; I have seen it in action and NO you can't have it, but you may use it, and I hope all of the members of this SIG will get to use it and gain much information from it.

Since we are going to be so busy in November I do not know what more I can do for you, so If you have any suggestions or are willing to give a talk at a meeting or demonstration then I am all ears and willing to accept your help as we are always getting new members who are just starting out.

Do not forget to check out HEYCUZ as we are still adding new names each month and getting more and more responses.

Brothers' Keeper -- The latest version available is version 5.1. I have written to USA requesting a copy from John Steed as I have also requested some suggested improvements to PAF and Requested other programs from the PAF user Group, at the time of writing this message I have received no answers to my requests.

There will be a meeting at the November meeting to get information and try to keep you up to date with what is happening. We will not be having a meeting in December as we will be having a BIG Christmas party, brig your togs if you feel like a swim to cool down but then you may miss out on the food etc.

Next month look for a short report -- about one line.
Rob Gurney   355-4982

Hey Cuz!

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 205-5165

I am even receiving questions whilst I am out and not at the computer so I take a note of them and check when I get back. The above are the ones I could not match.

We are still adding new names to the list each month and more and more people are finding out that this system works. For further information contact
Rob Gurney (07)355-4982
rf leave a message in the members echo for me.

The surnames are as follows:-
Alexander Arthur Austin Barroh Bedford Bellas Bird Bonny Brownie Burgdorf Busch Cartwright Christensen Clark Collis Connelly Copelund Cracknell Crane Crawford Crilly Davy Farley Finch Fischer Fraser Ford Foster Freedignare Frewin Galletty Garske Gates Glover Golding Goulding Gray Green Grover Gurney Guest Haddock Haley Hammond Hannthan Hargraves Harris Heffernan Hodgkins Hodgson Holland Holtzuever Hunt Hyam Kiss Leckie Libbe Lockwood Lovis Lowson Ludlow Mc Casslin MacGregor McGrath McIntosh McKay McNamara Matthews Mensforth Middleton Morgan Neighbour Norris Otway Paget Pageudorf Pearson Perdeaux Pheonix Phillips Pie Price Purdnam Pye Robinson Ross (2) Rowles Rungert Ryan Schmid Scott Seymoure Shea Siiankoski Simpson Smith Steindl Stringer Sully Svier Thompson Thrupp Thurlow Timbray Turnbull Ussher VanBeek Waite Walters Welsh Whitmarsh Wilkins Wilson Woodforth
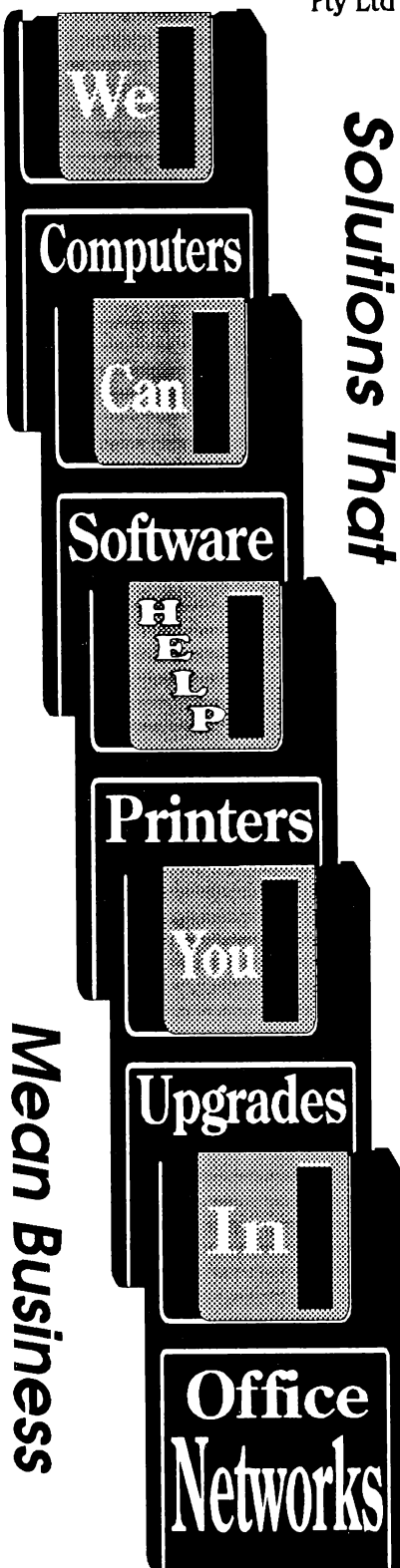
Hoax Alert

Xtratank - Hoax Disk Storage Expander

from the September NetHack Report

Xtratank has appeared on a number of BBSs in the US, claiming to be able to double the storage capacity of your hard drive. This report, extracted from the Hack Report, used by Fidonet Sysops to monitor hoax files, trojans, virus infected, unauthorised versions and commercial ripoff programs shows the "crazies" are alive and well, and still active.

"Finally, the news we've all been waiting for: Bill Logan's test results on Xtratank. If you recall, Mr. Logan, an agent of McAfee Associates, agreed to test out this file to see once and for all if it really works, or if it is a hoax.

Bill tested the program on two IBM compatible computers and one AT&T XT clone. The PC Clones were 286s, one with a 40meg IDE hard drive, the other with a 40meg MFM hard drive. The AT&T had a 10meg hard drive.

To weed out possible clashes with DOS versions, the test was repeated on each computer using 4 different DOS flavors: MS-DOS 3.30, IBM DOS 3.30, MS-DOS 4.01, and MS-DOS 5.0.

The hard drives were formatted and Xtratank was installed on each. The PC Clones now reported that their drive capacity was now doubled. The AT&T XT did not, since it was not a true IBM compatible. Bill then attempted to copy 80 megabytes of raw, non-compressed files from floppy disks onto the hard drives. All of the hard drives ran out of disk space after only 40 megs of files had been copied.

The testing did not reveal any viral or Trojan code. To quote Bill, "It is our opinion that this program is simply nothing but a hoax."

In addition to Bill's testing, Gary Weinfurther (1:120/301) sent a summary of his disassembly of the programs in the archive. He found that the XTRATANK.EXE and the XTRATANK.COM files contained the exact same code, with one padded with "garbage" that made it look larger. The code is designed to intercept the DOS 21h interrupt, function 36h, which is for determining free space on a drive. Xtratank then doubles the result.

None of the warning messages in the docs are present in the files, and no check is performed to see if it could be correctly installed. Gary says that since it is a simple interrupt-intercept TSR, "it can be successfully installed every time."

He suggests (humorously) that installing it twice would theoretically result in a report that your hard drive space had quadrupled.

This should settle the debate once and for all- **XTRATANK IS A HOAX AND DOES NOT ACTUALLY WORK.**

All of Bill's and Gary's results completely verify the Fitzgerald Test results, so if you still don't believe it, run the test for yourself.

The Fitzgerald Test

Here is the now-famous Fitzgerald Test, devised by Tim Fitzgerald of 1:3800/18.0 and validated by Bill Logan's test results. Try this if you think you have managed to get XTRATANK to work on your system. Follow these simple steps:

1. Run CHKDSK and write down the free space it reports as free.

2. Do a DIR command and write down what XTRATANK reports.

3. Copy any text file to a new text file.

4. Repeat steps 1 and 2, and compare.

You will see that XTRATANK reports that twice as much disk space is taken up by the new text file."

Software Library News

Lloyd Smith

BRISBUG CATALOGS

The catalogs have grown - yet again. With the inclusion of another 250 disks in the library over the last two months, the catalogs will now expand to 10 disks (for those who must put their catalogs onto 360K disks), and we still have hundreds of new programs yet to be assessed and included in the library. Where will it end...

Last month, thanks to Chris Raisin, we returned to our Brisbug Catalog Program originally written by Peter Grimes. This program allows you to extract your catalogs to floppy disks (if you must!) as well as the hard disk. We still haven't got over the problem of LHA asking you if you want to extract each individual catalog if you already have an old one on your hard disk. When you install your new catalog disks and the program asks

"CAT#.CAT Overwrite? [Y/N]"

you must answer *"Y"* to overwrite or you will not upgrade the particular catalog file.

With the ever increasing numbers of new programs we receive, invariably there are a number of upgrades of older programs, as these are checked, the old versions currently in the library are replaced with the newer version. The catalogs are constantly being changed - new versions replacing old and in some cases more disks are required to complete the upgraded version. So, to repeat myself, you must answer *"Y"* when LHA asks if you wisk to overwrite.

LIBRARY DISKS

It is apparent, judging by the number of phone calls I receive, that many members do not bother to check the contents of the disks they order. If fact, there is a growing number of computer users who get a disk, put it into

the floppy disk drive and type *"GO"*.

When that doesn't work they try *"INSTALL"*, and then they ring for help.

With the exception of the older PC-SIG disks, which we still have in the library, very few of the Brisbug disks start from "GO"! Only those disks containing some of the games programs work from *"GO"* and this activates a games menu from which you could choose a particular game to play.

When you receive disks from the Software Library, you should carry out the following checks:

1. Place the disk in drive A: and scan the disk for viruses. The latest Scan program is contained on the catalog disks as a self-extracting file and should be extracted to your hard disk drive or to another floppy disk if you do not have a hard disk. Always check your disks for viruses, as no matter how hard we try to make sure no viruses

are contained on the master disks, there is always the possibility that the computer, on which your disk was copied, may have had an infected program loaded and transfer the virus to your disk.

2. Check the directory of the disk by entering *"A:\dir"* or *"A:\dir/p"* and check the files contained on the disk.

3. On a considerable number of library disks is a program CRC.EXE, which is a test program to check the CRC of each file on the disk. CRC stands for Cyclic Redundancy Check, and checks the index of each file, the name of the files on the disk, the size of each file and the CRC of each file. This is an additional safeguard so that if the files have been tampered with, either by someone else or a virus has tried to write to the disk, the CRC check will not agree with the -CAT_NO#.### file already on the disk. Figure 1 shows what you would see if you ran the CRC program on the disks:

```
BRISBUG P C USER GROUP INC. CRC CHECK Version 10.0,
BRISBUG SOFTWARE LIBRARY
CTL-S pauses, CTL-C aborts

Checking   for  "CRCKLIST" file          Not found
Checking   for  "CRCKFILE" file          Not found
Checking   for  "-CAT_NO8" file          Checking with
                                         file: -CAT_NO8.944

BBUG8944.TXT -     80 EF *Match*
CRC     .EXE -     E5 EA *Match*
WARNING .TXT -     32 21 *Match*
WOLF3D-1.EXE -        FA CA *Match*
BRISBUG SOFTWARE LIBRARY * DISK NO  # 8944,   4 files
                                                   cataloged
            Disk compiled and distributed by
                BRISBUG P.C. USER GROUP INC.,
         P. O. Box  985,  TOOWONG. QUEENSLAND.   4066

DONE
Number of files that matched CRC   - 4
BRISBUG SOFTWARE LIBRARY DISK TEST No 4
```

Figure 1. Screen display of CRC check on Disk # 8944

```
* DISK NO 8944 WOLFENSTEIN 3-D (Disk 1 of 2, also 8945) ————

     CLASSIFICATION * Games * Hard Disk * VGA Only * Mouse/Joystick * Soundblaster *
80286/386/486 system
8944 WOLFENSTEIN 3-D is simply a technology breakthrough!  The first person perspective
3-D gameplay you'll be viewing is the fastest of any PC game game—much faster than that
seen in Origin System's The Stygian Abyss!
     Incredible Sound Blaster digitized sound effects are used throughout the game.
     You're William J. "B.J." Blazkowicz, the Allies' bad boy of espionage and a
terminal action seeker.  Your mission was to infiltrate the Nazi fortress Castle
Hollehammer and find the plans for Operation Eisenfaust, the Nazi's blueprint for
building the perfect army.  Rumors are that deep within the castle the diabolical Dr.
Schabbs has perfected a technique for building a fierce army from the bodies of the
dead.  It's so far removed from reality that it would seem silly if it wasn't so sick.
But what if it were true?
     You were never given the chance to find out!  Captured in your attempt to grab the
secret plans, you were taken to the Nazi prison, Castle WOLFENSTEIN, for questioning
and eventual execution.  Will you be able to escape and finish your world-saving
mission?
     As an escaped prisoner in a Nazi war prison, you will move smoothly through a 3-D
world full of amazing detail and animation.  Unlike other 3-D games, you'll move
SMOOTHLY through a sensational and realistic 3-D environment, with intelligent moving
guards and opponents.
     This is a high-action game.  Use your rapid fire machine gun to mow down a line of
enemies, or sneak up on a guard with your knife so you don't waste your limited
ammunition.
     PARENTAL WARNING:  WOLFENSTEIN 3-D, due to its intensely realistic visuals, is
recommended for children above 12 years of age.  For younger players we recommend
parental approval.  We have voluntarily rated this game PC-13, (Profound Carnage!),
which equates to violence seen in a PG-13 movie.
```

Figure 2. Showing the disk description file for Wolfenstein-3D. Note the warning for parents added by our Librarian - we try to make available only "family-suitable" disks.

This disk description also tells you that DISK # 8944 is the first disk of a two disk set, and if you were intending to use this program, you must have DISK # 8945 to complete the program files necess

4. Read the BBUG####.TXT file on the disk to check you have got the correct program. If you do not have a file viewer or editor on your computer you can read the text file by entering *"type BBUG####.TXT"* and press *[Enter]*. This will print the contents of the file to your monitor so you can read the details of the disk. If the text scrolls off the screen to quickly, use the Pause key to stop the text.

The BBUG8944.TXT file on this disk looks like Figure 2.

This disk description also tells you that DISK # 8944 is the first disk of a two disk set, and if you were intending to use this program, you must have DISK # 8945 to complete the program files necessary to play this game.

5. Look at any WARNING.TXT file on the disk by entering "Type Warning.TXT" [Enter]. If a WARNING.TXT file is con-

tained on the disk it will look similar to Figure 3.

Read this file as it tells you the the program WOLF3D-1.EXE is a self extracting file created by LHARC and to extract the file you must copy it to a hard disk or a large floppy disk before extracting it. Once you have copied the file you can extract it by

entering "WOLF3D-1" and press [Enter]. If you copy the file to your hard disk, you must make a sub-directory before copying the file (*C:\ MD WOLF3D [Enter]*) and then copy the file from A: drive to C:\WOLF3D. Once the file has extracted, you should then enter *"C:\WOLF3D DEL WOLF3D-1"* and press [Enter]. This will

```
┌─────────────────────────────────────┐
│  ┌───────────────────────────────┐   │
│  │ W A R N I N G     W A R N I N G│   │
│  │     W A R N I N G !           │   │
│  └───────────────────────────────┘   │
│                                       │
│ THE PROGRAM "WOLF3D-1"  CONTAINED ON THIS DISK IS │
│ SELF EXTRACTING PROGRAM.  NO OTHER  PROGRAM IS    │
│ NECESSARY TO  EXTRACT THIS  FILE. TO EXTRACT THE  │
│ CONTENTS OF THIS PROGRAM, YOU MUST  FIRST COPY THE│
│ FILE TO A SUB-DIRECTORY ON YOUR HARD DISK  AND THEN│
│ TYPE THE NAME   OF THE  PROGRAM TO ALLOW THE      │
│ CONTENTS TO BE   EXTRACTED.   YOU MAY THEN DELETE THE│
│ ORIGINAL PROGRAM.   THESE PROGRAMS ARE CREATED USING│
│ LHARC'S  SELF-EXTRACTING PROGRAM    AND CANNOT    │
│ EASILY BE EXTRACTED DIRECTLY FROM THE FLOPPY DISK.│
│                              BRISBUG               │
└─────────────────────────────────────┘
```

Figure 3. The display of "WARNING.TXT from Disk # 9844.

remove the compressed file from your hard disk, but still leave the program files for you to play the game or whatever.

We also use PKSIP's self-extracting program to compress large files. The program PKSFX makes a slightly larger file than LHARC, but it is simpler for you to use. You still have to make a sub-directory on your hard disk, but you can extract the file from the floppy by entering

"A:\FILE-1 C:\NAME (Sub-directory)"

and press [Enter]. This will extract the file straight from the floppy to your hard disk without the necessity of copying the file across to your hard (or larger floppy) disk, and you will not have to delete the compressed file from the target disk.

OLDER LIBRARY DISKS

Some of the older disks in the library contain programs which were written in BASIC. If you get programs which have files .BAS you need to use BASICA or GWBASIC to run the program. There is nothing wrong with these programs, in fact, some of them are still quite good and have never been re-compiled as stand-alone programs. Unfortunately DOS 5 and other versions of DOS do not contain BASICA or GWBASIC so you will have to search out a friend to obtain a copy of these programs. Because of copyright, Brisbug cannot supply you with either of these programs.

To run BASIC programs, (assuming you have BASICA or GWBASIC) you must first execute BASICA or GWBASIC, from the DOS prompt, and then enter *"LOAD XXX (Filename)"* [*Enter*], and then *"RUN XXX (Filename)"* [*Enter*]. After you have run the program and you wish to return to DOS, you must enter *"SYSTEM"* [*Enter*] and you will return to the DOS prompt.

You cannot use QBASIC to run these early programs.

DISK PRICES

Prices of copies of disks from the library have not changed.

5.25 360K disks - $4.00 each

3.5 360K disks - $5.50 each

Packing and Postage

up to 8 disks	$ 3.00
Over 8 disks	$ 5.00

PROGRAM WITHDRAWN

In the October magazine, on page 55,

Disk # 2662 ACCOUNT + PLUS

was described. However, this program has been discovered to be defective and has subsequently been witdrawn from the library. If and when a new version is obtained, further notification will be made.

VOLUNTEERS WANTED

One of the quickest ways to learn about Brisbug, and, in particular, the Software Library, is to work in the library at meetings. Apart from helping out the overworked regulars, who select, copy and check orders, you get to learn how the library operates, and you get to talk to lots of people and you can learn a lot about computing.

If you can spare part of your day, helping out, why not offer your services in the library. Talk to Terry Tuttle, or one of the librarians on the day and make some arrangements with them.

By the way, Library Assistants are eligible to copy their own programs from the Software Library AT NO CHARGE to them. All you need to do is provide your own disks. Think about how much you could save, if you were prepared to spend some time working for Brisbug on a Sunday meeting.

Library Update

Brisbug Software Library — New Program Listings

OS/2 Collection

BBUG 4025 ARCHIVE VIEWER Version 1.13

*CLASSIFICATION * Archive * OS/2 * Hard Disk*

ARCHIVE VIEWER is a 32-bit PM archive viewing, application launching, and file maintenance utility for OS/2 2.x.

For archive viewing, ARCHIVE VIEWER uses a plain text configuration file to get information about how different archives look and how their corresponding archivers work. This file is included in the ARCHIVE VIEWER archive and is easy to modify to add other archivers using a text editor. As supplied, LH2, PKZIP, ZOO, ARJ (via UNARJ) and ARC are configured for you. ARCHIVE VIEWER requires the OS/2 archivers to be present (on your PATH, preferably) to work. ARCHIVE VIEWER is a controller program that collects data from and interchanges between you, your files, and your archivers.

BBUG 4026 LST-PM Version 1.00

*CLASSIFICATION * Utilities * OS/2 * Hard/Floppy Disk*

LST-PM 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, LST-PM allows searching for keywords in files, using full regular expression matching. You can also view files in the form of a HEX dump.

BBUG 4027 SYSCOLS - FILE COMMANDO

*CLASSIFICATION * OS/2 * Utilities * Hard Disk*

SYSCOLS Version 2.0 is a Presentation Manager System Color Configuration Program for which offers configuration of OS/2 Presentation Manager's system colors. It was originally written to provide several advantages over OS/2 1.x's Control Panel.

SYSCOLS features include: * 41 system colors that can be changed (the Color Template "Different", although some may think it ugly, serves to demonstrate each system item as a different color) * Most color changes are visible immediately. * Sample Color Templates are available. Additional Templates can be created, or existing ones can be modified. * Colors can be set temporarily or permanently saved to OS/2's INI file. * A color template can be loaded from the command line (ideal for use in CMD files).

FILE COMMANDO - A file utility for OS/2. For those familiar with the DOS utility Norton Commander, FILE COMMANDO attempts to provide most of the same functionality under OS/2.

Using FILE COMMANDO you can copy, move, rename, delete, find, view, and edit files in a multi-window file list. This list shows two directories, through which you can navigate using the cursor, page up & down, home and end keys. The TAB key switches between the two directory windows. Pressing the RETURN key when a directory is highlighted will move into that directory.

Pressing the SPACE BAR or INS key when a file is highlighted will mark that file for later copy, move, or delete operations. Directories cannot be marked. The + and - keys can be used to select or unselect (respectively), files matching a specified pattern.

BBUG 4028 WPSBACKUP Versions 3 & 4

*CLASSIFICATION * OS/2 * Utilities*

WPSBACKUP is a 32 bit utility that will backup status and configuration data for the OS/2 2.0 general availability (GA) WorkPlace Shell (WPS).

Simple to install, WPSBACKUP offers the ability to save desktop setup information, store the information where directed by the user and reload it if ever needed.

Two versions WPSBACKUP are included, and the user should select the version suitable for their particular needs.

### BBUG 4029 FREETIME - ALARMCLOCK

*CLASSIFICATION * OS/2 * Utilities*

ALARMCLOCK provides a system clock which allows the setting of time and date as well as simple alarm functions. ALARMCLOCK whilst similar to the OS/2 system clock can also be used as a task scheduler. FREETIME is a combination program which provides a graph of CPU usage and a screen blanker which is not tied to the "Lockup" security feature of OS/2. Two versions, 1.81 and 2.00 are contained on this disk, each having slightly different features from the other.
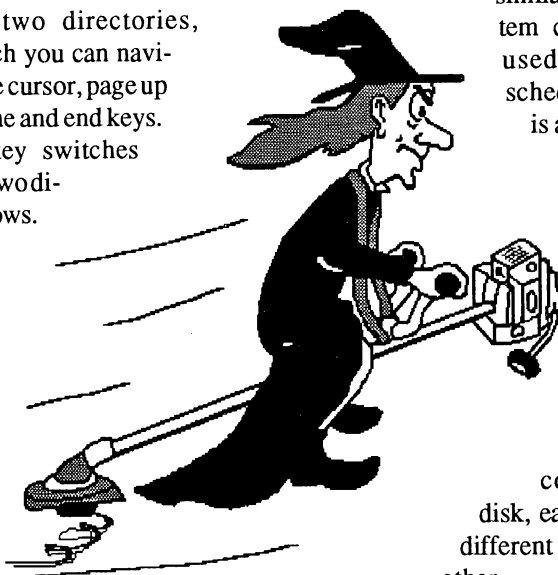
BBUG 4030 TINY EDITOR Version 2.00

*CLASSIFICATION * Editor * OS/2 or DOS * Hard Disk*

TINY EDITOR - T- is a full screen text editor and is designed to be quick and easy to learn and simple to use, while remaining both extremely powerful and very small - the DOS version being under 9K bytes in size.

A very small editor has a number of advantages:

It may be used on machines with a limited amount of memory. Even a PC with a full 640K of memory can have a large amount of this used up when a number of terminate-and-stay-resident type programs are installed - local area network drivers and terminal emulators are prime examples.

It may be used for editing large files, that would be too large to load into memory with a bigger editor.

It may be invoked from inside other programs yet still have enough free memory to edit a good sized file.

It loads and starts very quickly.

BBUG 4031 INIMAINT Version 1.1

*CLASSIFICATION * OS/2 * Utilities * Hard Disk*

INIMAINT is a collection of Presentation Manager programs designed to allow maintenance or modification of OS/2.INI files. One of the objectives of INIMAINT is to give the user an easy way to create backups of all or part of his INI files and to provide an easy way to restore an INI file, neither level of manipulation is satisfactory.

INIMAINT solves this problem by giving the user the ability relate a set of Applications together into a Group.

Forming the Group does not change the Application information in the INI file, it simply creates an additional Application in the file that describes the Groups that the user has formed.

Once the Groups are created, then the Group name can be used in INIMAINT operations and all the Applications in the Group will be included.

BBUG 4032 EPM-SPELL (Disk 1 of 2, also 4033)

*CLASSIFICATION * OS/2 * Editor - Spell Checking * Hard Disk*

EPM-SPELL adds the ability to include spell checking facilities to your OS/2 Enhanced Editor. The addition of the spell checking facilities makes it practical to use the Enhanced Editor as a simple word processor.

BBUG 4033 EPM-SPELL (Disk 2 of 2, also 4032)

OS/2 Games

BBUG 4034 ROLLBALL Version 0.99

*CLASSIFICATION * OS/2 * Games * Floppy Disk * VGA * Mouse*

Just the thing to whet your appetite, OS/2 users. ROLLBALL is a Presentation Manager Game. The game commences with various coloured dots on the screen and a red ball which bounces from side to side. By using the mouse the player places paddles on the screen to deflect the ball. The object is to roll the red ball around the screen avoiding the black holes and score points.

ROLLBALL is a true 32 bit, multithreaded Presentation Manager Program. Source code is provided.

BBUG 4035 TRASHMAN Version 1.0

*CLASSIFICATION * OS/2 * Games * Floppy Disk*

TRASHMAN is not only a game, but also a Presentation Manager program. The game requires your ability to solve a logic problem.

The object of TRASHMAN is to sweep piles of rubbish into the trash bins without allowing yourself to be blocked. As you advance through the 50 levels, the obstacles become more and more complex to avoid.

DOS collection

BBUG 8856 VEHICLE COSTS Version 2.00

*CLASSIFICATION * Business * Floppy/ Hard Disk * Printer*

Using your computer to keep track of vehicle expenses can be hard work, especially as most of the programs you see are written for use in other countries, but don't despair - here is and Australian program to solve all your problems.

VEHICLE COSTS allows entry and retrieval of information related to the purchase, repair, service, and running costs associated with one to fifteen vehicles per directory.

VEHICLE COSTS will provide display or hard copy of records in total, by category, by selected item name (i.e. tyres, spark plugs, etc.) or total amounts by category over a specified range of years. You can maintain records of fuel usage and give fuel consumption per fill, and average the last ten records. It also spreads the cost of the vehicle over the nominated period giving a year by year total cost

VERY EASY MENU SYSTEM

BBUG 8957 DAMENU Version 1.2

*CLASSIFICATION * Menu * Hard Disk*

Most of the menu systems out there seem to be big & clumsy, do more than you really need (read featuritis), and are a pain to use. DAMENU is a no-nonsense, easy-to-use hard disk menuing utility for the beginner as well as the advanced user. It suits the user who has a very limited number of applications, and uses every one of them (e.g a secretary or small business person).

DAMENU offers built-in screen blanking, password protection, and no memory overhead. This means that your

applicationsare free to use as much memoryas is available on yoursystem, without any interference from DAMENU. Applications can be accessed by as few as two keystrokes (one to invoke the menu itself, and one to select the application), and files can be passed to applications such as word processors and spreadsheets which saves even more time. Installation is easy, and application/setup is as simple as pressing the appropriate function key.

DAMENU also has mouse support, which allows you to select the application by highlighting the function key button and clicking a mouse button.

BBUG 8958 FIRE FIGHTER Version 1.26

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

FIRE FIGHTER is a Roster, Practice, and Incident Database For Volunteer Fire Departments.

FIRE FIGHTER has been designed to keep your Roster up to date as well as print out individual Records or whole Rosters, keep track of Practice Records (what you practiced and when), keep details of payments owed or wages owed for Practices and Emergency calls show all Practices or Emergency calls or only those of the current year, keep track of your Emergency Calls and print them out as required, keep

Maintenance Records on your Equipment, keep all Records pertaining to Practices, Maintenance, Training, Fires and Fire-fighter Records at the press of a key, keep an appointments calendar, keep a dialing list of important numbers and dial them automatically, and will also keep an up to date log of when the call was made and much more.

BBUG 8959 PALLANDA Version 1.6

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

This is a fun game for the "little people", with enough strategy to make it challenging for Dad and Mom. Prince Pallanda can be included as one of the four players. The name, PALLANDA, comes from 'Pal Land' where everyone plays happily together and King Pallanda makes sure everyone plays fair. PALLANDA is designed so even youngsters that aren't reading yet can learn to play well.

The object is to land in the winner's circle by moving to the closest color shown on the spinner. It sounds simple. However, the nearest matching color is often in the wrong direction and sometimes you must choose between squares that are the same distance away. There are hidden surprises along the way with pictures you can watch being drawn.
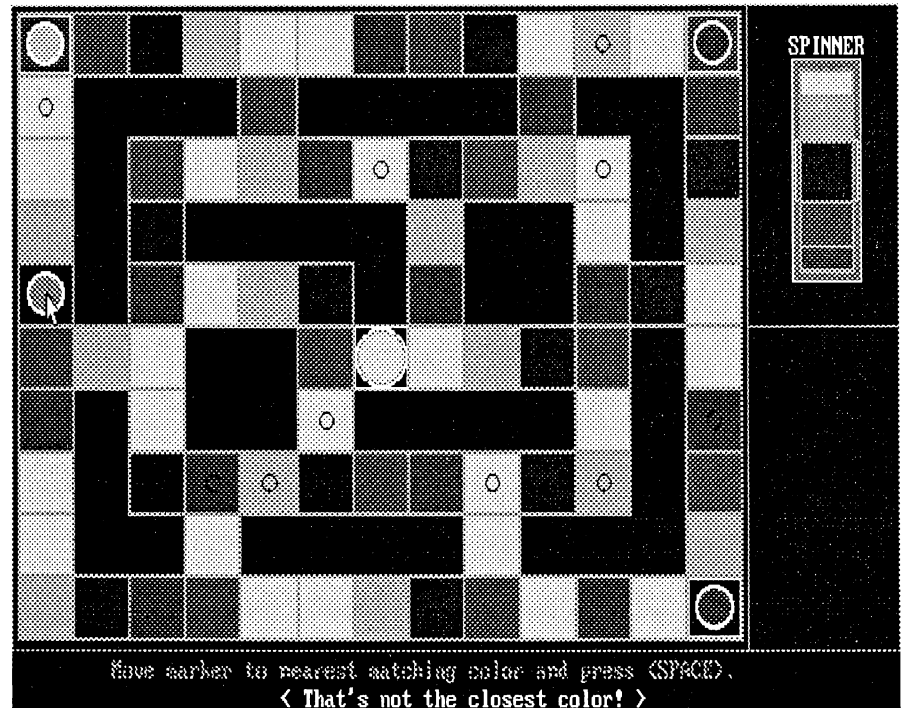
PALLANDA is a strategy game for the younger fry.

BBUG 8960 SECRET AGENT Version 1.0

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

SECRET AGENT -THE HUNT FOR RED ROCK ROVER. To agent 006 - For your Eyes only

Government scientists have been working on a secret project: A ruby powered laser sattelite with ability to pinpoint and fire on any target from Earth orbit, code named RED ROCK ROVER. Two weeks ago the blueprints were stolen by the Diabolical Villain Society (DVS) which will then use them to build the ultimate terrorist threat.

You've been chosen by the bureau to infiltrate DVS headquarters and secure the blueprints. The headquarters are located on a series of islands in the Pacific basin.

Your mission, should you chose to accept it, is to bring back the secret blueprints to the "Red Rock Rover" project. You will be isolated from outside help.

You should be warned that this misson is of global importance and must succeed in order to maintain a balance of world power.

We do not have a file on the head of the DVS, but he is suspected to be very cunning and dangerous. DVS headquarters are built up as an elaborate series of fortresses on three hell guarded islands.

As always, should you be caught the Bureau will disavow any knowledge of your existence.

BBUG 2705 MEMORY and SYMBOL-QUEST

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

MEMORY Version 2.0, is a very old and well known game of memory and concentration. At the beginning 50 cards (two series with each 25 pictures) were shuffled and layed out face down. Both players

have to try to find two matching cards.

After the deck of cards is layed out, the first player has to move the cursor around to turn a card over. The player repeats this procedure to turn over a second card. If the two cards match, one point is awarded and both cards will be removed; the player tries again. If both cards don't match, the other player tries to find a matching pair and so on. MEMORY shows always the score of both players and which player has to choose cards. Play against a friend or five different levels of the computer.

SYMBOL-QUEST Version 1.0, simulates the mathematical problems you know from many magazines. The PC computes a problem and encodes it by replacing every number by a symbol; your task now is to solve this problem. In the horizontal direction there are three additions, in the vertical direction three subtractions.

BBUG 2706   PC-WIZARD II POWERMASTER   Ver 2.2

*CLASSIFICATION * Utilities * HardDisk*

PC-WIZARD II POWERMASTER gives you the power to run your favorite application program by selecting it from the PC-WIZARD Programs Menu and then immediately prepare a backup of your changes by accessing the PC-WIZARD Backups Menu. You can add, change, or delete your programs and backup menu selections quickly and easily by accessing the PC-WIZARD Setup modules.

These features alone make PC-WIZARD II POWERMASTER one of the most powerful productivity tools available today. However, with the addition of the PC-WIZARD Manager you have been taken to the next generation of computer usefulness, efficiency and POWER!

The PC-WIZARD Manager not only allows you to execute any, and ALL, commands that can be entered from the normal DOS prompt, but actually TEACHES you how to use each of these commands. Through this revolutionary new approach, even first-time computer users will be capable of mastering the complexities of DOS in a matter of hours by viewing all needed instructions for each command on-screen and then immediately executing the command from the PC-WIZARD Manager Command Line.

One of the most unique, and POWER-FUL, features of PC-WIZARD II

Game of the Month - Secret Agent006 is about to hit the beaches

POWERMASTER is that it automatically removes itself from memory prior to running of the selections made from the Programs Menus. This allows you to run even your largest accounting or database programs from within PowerMaster without fear of running out of precious RAM memory needed by those programs. PowerMaster is also completely reliable for running of communications programs without interference or conflict of any kind.

BBUG 2707   CHECK-KING Version 3.02

*CLASSIFICATION * Accounting/Business * Hard Disk * Printer*

CHECK-KING is an easy-to-use yet full featured chequebook accounting system. The goal of CHECK-KING is to give you virtually effort-free control of your cheque account.

With CHECK-KING, you can, Record your cheques electronically with a minimum of effort. Predefine twenty-one payees for 2-stroke data entry. Track up to 97 categories of cheques. Easily review your cheques with a flexible variety of requests. List all of the cheques written between any two dates. List all the cheques written between any two amounts. List the cheques written to any one, two, or three payees. List any combination of the above. List cheques by category. List only outstanding transactions. Reconcile your checkbook to the bank's statement without driving yourself to distraction. Clear transactions in a matter of moments. Receive help in finding discrepancies from the Reconcili-

ation Problem Finder. Discrepancies caused by a single transaction error will often be explicitly identified.

In short, CHECK-KING will help you to record, track, and balance your cheques. It does the types of things you hoped a computer would do —before you found out otherwise.

BBUG 2708   ONE VIEW Version 1

*CLASSIFICATION * Utilities * HardDisk*

ONE VIEW is a complete DOS and hard disk management utility for Managers and System Administrators, which allows monitoring and control of the activity of a computer station for up to nine different users.

Each user can quickly define their own menu to run specific application programs or issue DOS commands. As a DOS utility, ONE VIEW has easy-to-use pull-down menus and a directory tree display, which allows the user to make, remove, rename and even hide directories. Users can tag specific files to copy, move, delete, rename, or change the attribute. Files can be encoded so that they can not be read or executed by other users. ONE VIEW has file-searching capabilities that work across all directories. Select a file and automatically execute the application program.

ONE VIEW is more than a typical DOS shell or file management utility: it is the type of complete management tool for a PC computer station that has previously only been available on mini and main-frame computers. With ONE VIEW, an

administrator can control and monitor all computer activities. Reports and statistics can be generated recording the user name, the application, the date and time of execution, the amount of time the program was executed, and the amount of time there was activity with the application.

ONE VIEW has an excellent file security system. For each application program or file, the administrator can restrict access to certain users. Even if a user exits to DOS, uses another bootable disk, or copies the program elsewhere, access to that program will be restricted. All invalid access attempts are recorded in the computer usage statistics.

ONE VIEW is an ideal way to allow users to have access to their own programs and yet prevent unauthorized copies of software from spreading within the organisation.

BBUG 2709   BALLOONS and DRAWSOME

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

BALLOONS Version 3.8 - is a simple, easy to use program designed to help young children become familiar with the computer and have fun at the same time. It provides visual delight for children 18 months and up and hands-on experience with the computer. Balloons appear as any key is struck and may be enlarged until they pop into a rainbow as "Twinkle, Twinkle Little Star" plays. This program is designed to be your child's first program and to provide hours of enjoyment.

DRAWSOME Version 2.4 - is a simple, easy to use program designed to help young children become familiar with the computer, mouse, and mouse operations and to have fun at the same time. Children from 18 months experience visual delight as they draw lines on the screen by moving an image of a hand with the arrow-keys or

with the mouse. Line color is selectable by keys or by clicking the mouse buttons. The program also draws various flowers, circles, triangles, and squares. An excellent program for developing mouse skills, finding the location of certain keys, and learning basic geometric shapes.

BBUG 2710   TECHSTAFF GAMES Volume 1

*CLASSIFICATION * Games * Floppy Disk * Graphics Monitor*

TECHSTAFF GAMES is a collection of four games plus a small file viewer program, which includes: KENO — A game where the computer chooses twenty random numbers from a possible eighty. A player may choose from one to eleven numbers, and after each turn, the number of successful guesses is displayed. WILDCATTER — An oil drilling game. Guess where and how deep to drill, based on available geology reports. Site location is random, but the depth you drill to is determined by the reports. SEA BATTLE — A battleship game where you must seek and destroy a submarine located in the depths below. Fire three depth charges for each torpedo fired on your ship.

BBUG 2711   TECHSTAFF GAMES   Volume 2

*CLASSIFICATION * Games * Floppy Disk * Graphics Monitor*

TECHSTAFF GAMES contains a collection of popular games for all ages including: HIQ1 — A puzzle with 32 pegs arranged in a cross with the center position empty. The object of the game is to remove all but one peg by jumping across pegs horizontally or vertically. PCMAN1 — Another version of the popular game PacMan. Choose between one to four ghosts. WHEEL3 — A version of the game Wheel of Fortune, for one

to three players. A hidden phrase is given, and each player is given a turn to guess a consonant or buy a vowel. STATES1 — A States and Capitals quiz game. Questions can be True -False, multiple-choice, or fill-in-the-blanks. ERULET1 — The game of European Roulette for one to four players. Thirty-six possible outcomes are on the wheel and each player makes bets on which number might come up next.

BBUG 2712   TRAINBALL Version 6/90

*CLASSIFICATION * Games * Floppy Disk*

TRAINBALL is a model train layout similar to pinball. A game for all age groups. You can create layouts with switches, tunnels, bumpers, and other features. Three trains can be designed with up to seven cars to a train.

Objects on the user-designed screen affect the direction of the trains, which can fire missiles at other trains. Switching is randomly controlled by the computer but train speed is controlled by the user. If any of the trains collide, there is an explosion and the game ends.

BBUG 2713   TWENTY GREATEST IDEAS IN HUMAN RELATIONS Version 1.01

*CLASSIFICATION * General * Floppy Disk*

THE TWENTY GREATEST IDEAS IN HUMAN RELATIONS is a computer assisted instruction course. It is designed to give the user a working knowledge of the 20 greatest ideas ever developed for getting along with people. These ideas are presented in sequential order, with the user providing feedback to show his understanding of each idea introduced.

This process can take quite a time if an incorrect answer is given as the program will not allow the user to continue until all answers and spelling are correct. Once the proper response is given, the user is allowed to continue until all the material has been covered. In order to complete the course a perfect score must be made on a 20 question test. Failure to get a perfect score implies that the user has not mastered the course, and the test must be taken again. The course is easy to understand and takes about an hour to complete.

DON'T FORGET OUR RANGE OF KITS

BBUG 2715   THE ELECTRONIC CATALOG Version 2.0

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

Now the modern way to improve your Business image! No longer will you have to produce those printed catalogs and price lists. THE ELECTRONIC CATALOG is a Construction Kit which replaces the traditional paper catalog. You can create a personalized catalog of items for sale, including short descriptions and prices. Define such details as a company letterhead, sales taxes (if applicable), methods of payment, and any fright and handling charge to be added to orders.

THE ELECTRONIC CATALOG is produced on a floppy disk and is provided with a display program, a database of products and prices for the viewer to look at and a README file containing information about the program. All this is done without any user intervention.

The user can look at the catalog from DOS and can select the items to be purchased and the quantities of each - a running total of prices, sales tax and other charges are kept and an order/invoice is produced and provides your customer with

space for entering despatch/billing addresses.

BBUG 2716   RICHARD WEBSTER PROGRAMS Version 1.1

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

RICHARD WEBSTER'S AURA READING and RICHARD WEBSTER'S QUICK NUMEROLOGY: Based on the work and research of internationally-known psychic entertainer Richard Webster, WAURA helps you learn what to look for when attempting to see the human aura.

WQUICK uses a special method of Numerology, popular in Australia and New Zealand, to give a quick but pointed personality profile.

WHAT A PERSONALITY !
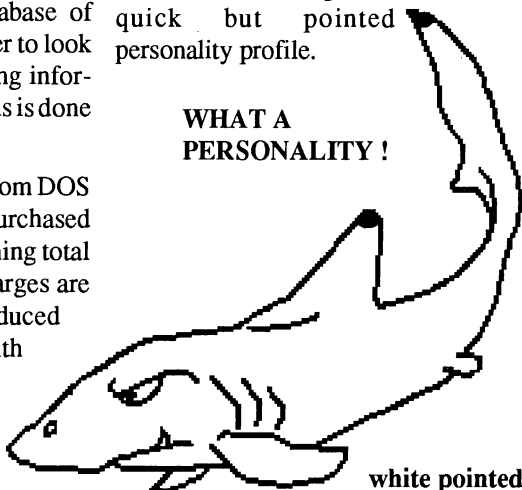
EEEEEK !!!

white pointed

Great fun! Complete documentation included.

BBUG 2717   PC MONEY2 Version 2.2

*CLASSIFICATION * Finances * Floppy Disk * Graphics Monitor * Printer*

Keeping track of finances gets harder every year. There are so many programs around choosing the right one is very confusing. One program figures out loans, the next is needed to plan retirement, and yet another is required to track investments. Forget the rest - try PC MONEY2.

PC MONEY2 will tell you anything about any loan you may be considering. Find the monthly payment, the largest loan you can afford, and the years required to pay off the loan — even if it has balloon payments. You can even print the loan payoff schedule.

PC MONEY2 will also show you how to plan your investments Find out how much money you can put in or how much you can take out. If you have a fixed amount invested and you want to see how it will grow, PC MONEY2 will show you.

Let PC MONEY2 plan your retirement. Calculate how much money you'll need to invest in order to receive a regular income after retirement.

PC MONEY2 is the one financial tool for all of your investment planning.

BBUG 2718   PRINTPLUS Version 5.6

*CLASSIFICATION * Printing Utility * Hard/Floppy Disk * Printer*

PRINTPLUS is a full featured file printing program. PRINTPLUS prints files with options to save paper by skipping extra blank lines. File viewing, Tag and Copy, Move, Delete. Redirection of output to an ASCII file.

PRINTPLUS features Pull-Down Menus and optional mouse support. It can print files from specified page numbers, print line numbers, preview number of pages to print, and replace IBM box characters with User defined characters.

Configurations are possible for printer setup, screen colors mouse functions, text output, and more.. It will also print filename, current date /time and File's date/time at the top of the first page.

BBUG 2719 FLEXIBAK PLUS Version 1.01

CLASSIFICATION Utilities * HardDisk*

FLEXIBAK PLUS, like its predecessor FLEXIBAK, is a flexible, easy-to-use hard disk backup system with a logical, simple and unique approach to the backup problem.

With the conventional backup system, you are required to complete a full backup approximately once a week with daily incremental backups, placed on separate disks. If you need to restore from the backup, you must first restore the full backup and then each of the incremental backups up to the last backup done.

FLEXIBAK PLUS, replaces the concept of full and incremental backups. Instead, you only need to do a full backup once with all subsequent backups placed on the same backup disks, providing some long-term speed increases, simpler file restoration, and an improved backup management capability.

BBUG 2720 BOOK OF CHANGES Version 1.31

CLASSIFICATION * General * Hard/ Floppy Disk * Printer*

BOOK OF CHANGES: The I Ching, a classic of Chinese literature, is a book of divinations originating in antiquity. Its poetic messages are used both for fortune-telling and for insight into humanity's role in the world.

By tossing coins or sticks, you create a pattern of lines to form the hexagram to be interpreted. The "yin and yang" philosophy of the I Ching is ideally suited to the "0 and 1" mentality of the computer.

This customizable program lets you edit the text and add comments. Readings can be printed and saved.

BBUG 2721 EZ-READER Version 1.33

CLASSIFICATION * Communications * Hard Disk * Modem*

EZ-READER reduces the time needed to read and create messages on bulletin board systems that use the Qmail, MarkMail, RoseMail, TomCat!, KMail, DJMail, RAMail, QWicKer, Jimmer, TriMail, MjrMail, and other QWK format compatible mail doors.

You can read and create messages off-line, saving you time and money on STD phone bills. EZ-READER is a total message management system allowing you to save messages for later retrieval. View the news, new files, and bulletins.
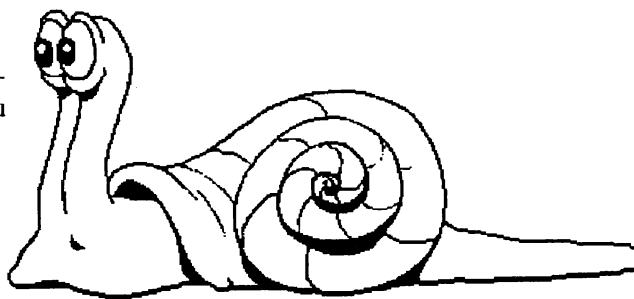
I'm waiting for Windoze to finish!

BBUG 2722 BACCARAT PROFESSIONAL Version 3.0

CLASSIFICATION * Games * Floppy Disk * Colour Monitor*

Most gamblers are very conversant with Poker, Black Jack and most other card games, but when it comes to Baccarat, this game is almost unkonwn outside of the European Casinos. Now you have a chance to learn the game without loosing your shirts!

BACCARAT PROFESIONAL is a computerised version of this game. Baccarat is normally played with eight decks of cards. Each deck consists of a standard 52 card deck, making a total of 416 cards. The cards are dealt from a shoe. There are only three bets available on the Baccarat layout. A player can wager on the Banker hand, the Player Hand or on the Tie bet.

BACCARAT PROFESSIONAL will teach you all you need to know, with detailed instructions and clever graphics, you'll soon become an expert, ready to take on the computer for high stakes and still 'keep your shirt'.

BBUG 2723 DARN! Version 3.0

CLASSIFICATION * Reminder * Hard/ Floppy Disk * Printer*

DARN! Don't Forget! - just the program you need to remind you of events that occur once each year. Forget someones birthday or even worse - your anniversary - well never again with DARN!. You can add important dates just once and the rest is simple - DARN! will run once a day and remind you a week in advance of these important dates, or even as far as 300 days away.

DARN! makes it easy to add, change, or delete dates. You can keep multiple lists for family and business, print out your

database of events, or export it to other databases. DARN! is so easy to use, you'll never again have a excuse for forgetting that special date, again.

BBUG 2724 COMPUTER GARDENING DATA DISK Version 1.0

CLASSIFICATION * Gardening * Database (DIF import Capabilities)

Computers are taking over everything - even gardening! Now you can add information on over 400 flowers to your favorite database. The information included covers: botanical name, best use, light needs, height and colors, soil, season, cultural information, and more.

The COMPUTER GARDENING DATA DISK isn't a database — it is data on flowering bulbs in standard comma delimited format. This format, also called Data Interchange Format (DIF), can be imported to almost all popular databases.

BBUG 2726 SUPER-MAINT Version 2.0 (Disk 1 of 2, also 2727)

CLASSIFICATION Programming * Hard Disk*

SUPER-MAINT is a program development Maker, bundled with the SUPER-MAINT editor, and the SUPER-MAINT Help Facility. It has many sophisicated features for building programs from source code kept on many drives and directories, and can keep object and executable files in user specified directories.

Other features include support for 3 Memory Models, 3 languages at a time plus a linker and librarian, DOS commands, "touch files", erase object files and more. Saves keystrokes by remembering what you are working on. Microsoft, Borland, Aztec, Clipper and Mix compiler compatible.

The SUPER-MAINT Editor is a full featured program for automating the development of make files. In addition to SUPER-MAINT files it builds Microsoft MAKE and NMAKE files, linker Response files, librarian Response files, PC-lint indirect files and Clear+ List files. Context sensative help is provided with an on line manual.

BBUG 2727   SUPER-MAINT Version 2.0   (Disk 2 of 2, also 2726)

BBUG 2728   HARD AT WORK   Version 1.1

*CLASSIFICATION * General * Hard/ Floppy Disk*

HARD AT WORK ties up your computer with a very important task so you can take a break. When you start HARD AT WORK, it selects one of 7 routines at random. You can pick your favorite routine by pressing the appropriate function key.

The screens supplied are those of a system test, a database re-index, spreadsheet FILL option, disk optimization using Speedy Disk, a virus scan, and a speaker integrity test.

The activity on screen looks too important to be interrupted. If someone does try to interrupt the action by pressing ESC or <CTRL><C>, a "DANGER!" message pops up, and a tone alerts you. The routine

I missed Wolfenstein-3D !

continues until you select something different with a function key, or until you exit the program by pressing the correct key sequence.

Just the program for your office computer. Trick your co-workers or fool your boss into believing that the computer is at work while you take a break!

BBUG 2730   BY THE NUMBERS   Version 4.2

*CLASSIFICATION * General * Hard/2/ Floppy Disks * Printer*

The use of numbers predates the alphabet, and the philosophy of Numerology is very ancient. BY THE NUMBERS provides a complete personality report by analyzing the symbolic meaning and metaphysical vibrations of numbers and the numerical values of letters. Of particular importance is analysis of a person's name, as the name contains the most important keys to character traits and underlying psychological structures.

Pythagoras, who was a great teacher of Numerology in ancient Greece, developed a system of converting letters to a numerical value and by combining these numbers arrived at a single value for every name. The Pythagorean system takes name changes into account, analyzes 10 separate personality elements, and provides your forecast for the future. From the information obtained, you can produce a report which can be saved and edited for a personalised reading. Reports from this popular program have been used by many numerologists for quite some time.

BBUG 2737   POKER SLOT Version 2.00 (Disk 1 of 2, also 2738)

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

POKER SLOT is a gambling game widely playerd in casinos in Nevada and New Jersey. Playing one of these slot machines is easy, but before playing POKER SLOT, you should choose one of four variations of the game —

Second Chance Poker, Joker Wild, Deuces Wild, or Double Down.

Save a fortune on the Pokies with "POKER SLOT" ... without hooking in to Wayne's network

The object of the game is to get a poker hand of Jacks or better before you can win any money. You will be paid off according to your poker hand. The better the hand, the more money you'll win. Just like the real POKER SLOT machine you must first insert some money. You'll be playing the dollar Poker Slot, so each coin will be worth $1.00. You will be dealt five cards in each round and you may choose which ones to hold or discard.

Have fun and WIN!!!

BBUG 2738   POKER SLOT Version 2.00   (Disk 2 of 2, also 2737)

BBUG 2740   WORKBASE and RECAP

*CLASSIFICATION * DBase/Clipper * Hard Disk*

WORKBASE Version 3.2, is designed with the serious database developer in mind, it provides an interactive environment for dBASE language commands, including some that may be new to you.

WORKBASE features include: Create a DBF file; append a DBF file, Edit and browse records, Restore from and save to MEM files, Display memory, Display structure, Modify structure, and many other commands necessary for development, troubleshooting, and support.

WORKBASE includes a simple PRG interpreter. If your applications use dBASE-compatible DBF files, you'll love this handy utility. Unlike other "dot prompt" programs, this one works! Everything you need to create and manipulate dBASE III data, memo, and index files is here.

RECAP, Version 2.1. It can be very frustrating to find that some of your database records have been entered in caps when you didn't want them that way, or that some have not been entered in caps
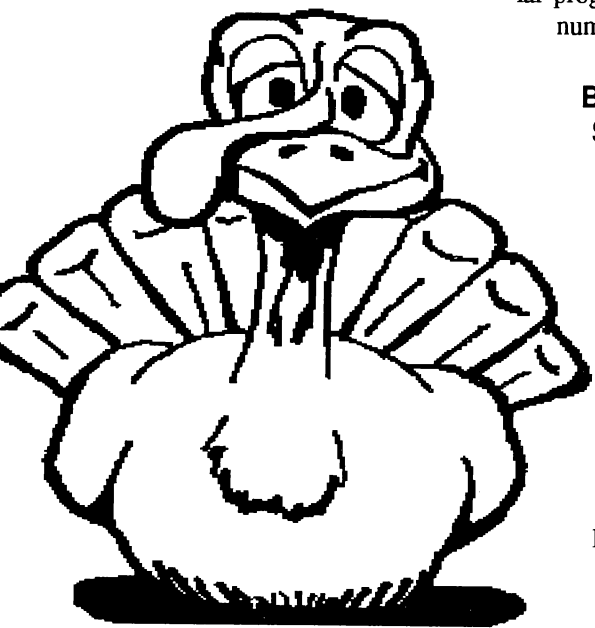
when you wanted caps. RECAP will go through any dBASE III-compatible file and make the desired adjustments. Save yourself hours of re-entering data.

BBUG 2741   CURSES! Version 2.0

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

CURSES! is a humorous and creative "insult generator" with a twist. A single keystroke switches from insults to compliments! You control the contents so the program can be used to generate descriptive phrases on any subject. Phrases are randomly generated, based on your vivid vocabulary!

BBUG 2742   THE CASE OF CRIME TO THE NINTH POWER Version 1.5

*CLASSIFICATION * Games * Floppy Disk*

THE CASE OF CRIME TO THE NINTH POWER is the first in the series featuring Cliff Diver, a hard-boiled, ex-cop private eye who lives and works in San Francisco. You must help Cliff escape from the Zamboni crime family's secret headquarters. Along the way, you and Cliff will face snarling Dobermans, two of Zamboni's goons (named Flash and Bonzo), and many other twists and turns. A captivating mystery to solve.

This is THE AVENTURE TOOLKIT's 1990 Text Game Winner. The game features a 400 + word vocabulary, a pop-up Help system, and a Save/Restore feature.

THE ADVENTURE TOOLKIT is contained on BBUG # 1230 and # 1231.

BBUG 2743   MULTIWORD Version 1.2

*CLASSIFICATION * Word Processing * Hard/HD/Floppy Disk*

Many the time, when you are busily writing on your computer, using either a word processor or text editor, you can't quite find the right word to express yourself in the sentence. You could ask someone, or find your old thesaurus and thumb through the pages to find the right word, or you can call MULTIWORD.

MULTIWORD is an electronic thesaurus that provides the PC user with instant access to over 70,000 synonyms for over 9000 main entries.

MULTIWORD features include an easy user interface, compressed dictionary data.

MULTIWORD can operate in 1 of 2 modes: (1) As a normal (non-resident) program or (2) As a TSR (resident in memory).

BBUG 2744   FORTUNE TELLER Version 3.0

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

Just the program you are looking for if you are into fortune telling. With this collection of useful techniques you can interpret the future and prepare an impressive personalised report. FORTUNE TELLER offers three divination methods: Dice, Short Numerology readings, and Runes. Also included are explanations of each method and its history as well as an ESP test.

BBUG 2745   M-LABEL Version 3.11

*CLASSIFICATION * Mailing Labels * Hard Disk * Printer*

M-LABEL customizes labels, index cards, continuous-feed envelopes, etc., when working with mailing lists created by MAILLIST (BBUG #1506).

Choose from 1 to 4 labels across, 1 to 100 lines long, widths up to 250 characters, top and left margin padding, and distance between labels. Pick exactly which fields go on which line. User-defined fields allow you to insert any text into the printed output.

BBUG 2746   QUESTMAKER Version 2.1

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

Welcome to an exciting new program where you can play, modify and make your own Animated Adventure games. QUESTMAKER is a program that allows you to create your own adventure games using the QUESTMAKER editors in conjunction with a graphics editor like PC PaintBrush for the creation of graphic screens with a .PCX format.

QUESTMAKER is the first integrated graphics-based adventure game creation tool of its kind. QUESTMAKER uses EGA 640 X 200 16-color resolution graphics. Most other Adventure Games use only 4-color graphics or the lower EGA resolutions.

QUESTMAKER also makes an excellent educational tool where you can create subject specific games that make learning fun for your family and friends. The adventures you create are limited only by your imagination.

You will find QUESTMAKER packed full of functions that would normally cost you hundreds of dollars. In just a few hours you can learn to modify the existing game to create your own exciting, graphics based adventure game. It takes a team of programmers almost a year to create a complete game from scratch, but you can create a complete game with QUESTMAKER in a matter of days. No programming experience is required to create your own games. However, a working knowledge of DOS is recommended as well as a little experience with a .PCX format Paint program.

QUESTMAKER comes with a complete sample tutorial game called the "Adventures of Hero Harry." This game demonstrates most of the program functions. You won't need to worry about details such as Save and Restore operations, character movements, game Help, speed control, and inventory management since they are already built in.

These automatic functions will reduce your game development time. Create a complete game in a couple of days instead of a couple of years.

BBUG 2747   PRISM Version 1.10

*CLASSIFICATION * Utilities * HF/ Floppy/Hard Disk * VGA*

PRISM is a shareware utility that will allow you to reset the color attributes on your VGA screen. Instead of having to use DOS's 16 garish colors, you can create more pleasing palettes of colors for use with ANY non-graphics program.

PRISM's help screens will teach everything you need to know to use the program effectively. You will be creating bright new colors for your VGA system within minutes.

BBUG 2748   TP-ET Ver 1.0

*CLASSIFICATION * Utility * FloppyDisk* Printer*

TP-ET turns your computer and printer into an electric typewriter. All margins (top, bottom, left, and right) are programmable. You can set tab stops, decide if you want an End Of Line bell.

If your printer is IBM/EPSON-compatible, pick from six printer font -quality settings, or enter your own printer codes. Once the program is set up you save a configuration file to disk which is read every time you start TP-ET. You can edit an entire line of text before sending it to the printer.

Adjust any parameters such as tabs, margins, etc. from the 1-2-3 style Main Menu. Thirteen Help screens explain all setting options.

BBUG 2751   DAYO INSTALLATION Version 07/91

*CLASSIFICATION * Business * Hard Disk * Dayo Modules*

DAYO INSTALLATION has been developed to ease the process of installing the many DAYO programs. DAYO INSTALLATION 'sets-up' the process of installing all of the files onto the hard disk and then checks the configuration of each DAYO module to insure integration. Put your business name and address into each module and create all required databases and indexes.

DAYO INSTALLATION is designed for first-time installation only.

BBUG 2752 PRODEV*QUOTE UTILITY PROGRAMS Version 4.10

*CLASSIFICATION * Business * Hard/2 Floppy Disks * Printer*

PRODEV*QUOTE UTILITY PROGRAMS — The TRACKING program is used to track actual costs for a quotation, and print exception reports that allow you to see all variances between the quote estimate and the actual costs. The BROWSE program allows you to rapidly browse/edit the PRODEV*QUOTE (BBUG #533) material, labor, supplier and quotation data files via overlaid pop-up windows.

BBUG 2754 PRODEV*EPRICE   Ver 4.10

*CLASSIFICATION * Business * Hard Disk * Printer*

PRODEV*EPRICE - Electrical, Plumbing, Heating & Air Conditioning Contractors Price Maintenance system is companion software to the PRODEV*QUOTE (BBUG # 0533) system to allow these contractors to take advantage of weekly/monthly price updates from either the National Price Service (USA), Trade Service Corporation (USA), Trade Service Of Australia, Trade Service Information (UK) or Plumlee Custom Publishing (USA).

PRODEV*EPRICE features: * Pull-Down Menus * Freeze Unwanted Items * Extensive Windowing   * Customize Descriptions * Instant Screens * Virtually unlimited data file size * On-Screen Help Messages   * Complete program with all features * Complete Manual   * Customize Field Names * Point & Shoot Browse   * Import Data From 5 Price Services * Printer Support   * Self-Configuring Menus * Print Reports to printer, screen or disk

Requires BBUG Disk No. # 0533.

BBUG 2755   SUPERTRAQ Version 2.1S   (Disk 1 of 2, also 2756)

*CLASSIFICATION * Accounting * Hard Disk * Printer*

SUPERTRAQ is much more than just another expense tracking software package. The SUPERTRAQ software is only part of the expense management system. The system is designed based on a philosophy of tracking, managing and reporting your expenses.

The essential element to properly manage and report individual itemized expenses for tax and accounting records, personal and/or company expense records, etc., must be based on a system that is used easily and regularly. No system is useful if it is not used. The concept of SUPERTRAQ is designed to be simplistic and intuitive in both form and function. This approach to expense management emphasizes three elements; ease of use, consistency and accuracy.

SUPERTRAQ implements expense management much differently from other ex-

pense tracking software products because each individual's daily routine, activities and habits are different. SUPERTRAQ supports any day organiser or daily/monthly calendar system which provides a means to easily and quickly record expenses and file away your receipts in an organized method. At your leisure, you can enter the recorded expense information into your SUPERTRAQ software.

The SUPERTRAQ software provides the user with many features to help manage expenses simply and quickly. You may track expenses by project, employee, client or any number of expense files you define. One of the more powerful features of SUPERTRAQ is its ability to track and manage separate expense files. Expenses are categorized by Credit Cards, Cheques, Cash and Mileage. Each expense category includes the expense date, description, type code, tax status, daily entry number, amount and daily total for each entry.

Various reports can be generated to be used for tax preparation, accounting, project planning and tracking purposes, company and individual expense management, etc. All reports can be printed to the screen, to a file name or to the printer. Reports can be generated for daily, weekly, monthly and yearly reporting.

The SUPERTRAQ software utilizes pull down menus and pop up windows to provide an easy-to-operate user interface with no cryptic commands to remember. SUPERTRAQ easily tracks, manages and reports expenses for personal and business reporting needs.

BBUG 2756   SUPERTRAQ Version 2.1S   (Disk 2 of 2, also 2755)

BBUG 2757 PRODEV*MEMBER   Ver 1.09

*CLASSIFICATION * Church Membership * Hard Disk * Printer*

PRODEV*MEMBER is an excellent Church Membership Giving, Attendance and Talent tracking system for any sized church. Pull-down menus and on-screen instructions with context-sensitive Help makes the system highly intuitive to learn and use. The system uses dBASE compatible files.

Keep track of any number of members,

non-members, former members, shut-ins, visitors, and affiliated missionaries. By using a relationally-linked child database, information can be kept on zero to any number of children per member. Givings or Offerings are easily posted and a complete range of Giving Statements can be printed. Enter the appropriate information on talents, duties, and teaching expertise. and ANY information can be stored and selectively reported.

BBUG 2759   THINKING MAN'S SOLITAIRE Version 1.0

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

Are you familiar with the standard Solitaire game that builds a stack of cards from Ace to King? It's not so hard, especially if you don't have to stick to one suit. THINKING MAN'S SOLITAIRE presents a new twist: the order isn't as simple as Ace, 2, 3. In fact, you build four different stacks, each in a different order. Have trouble remembering what card comes next? Ask THINKING MAN'S SOLITAIRE to keep the order posted on your screen.

The documentation on the disk makes it easy to get started. Watch the colorful deck magically shuffle three times, cut, and stack. Deal the cards one by one, and see each one move to the stack you designate as your score mounts. If you have a mouse, you may use it. Otherwise, the keyboard does just fine. The hardest part of this entertaining game is stopping.

BBUG 2761   PAPERS Version 2.02A

*CLASSIFICATION * Database * Hard Disk * Printer*

PAPERS is a custom database for scientific literature intended for librarians, scientists, and graduate students. It can store details of publications of authors, title, journal (book), year, volume, pages, keywords (6), and notes (64K).

A Built-in text editor and search function work smoothly. Files can be sorted, merged, and are dBASE-compatible.

Other handy features include a DOS shell, storage in MedLine or ASCII formats, and a database size limited only by the avail-

able memory. PAPERS is intended for librarians, scientists, and graduate students.

BBUG 2762   GLEANERS INDEX Version 2.0

*CLASSIFICATION * Database * Educational * Floppy Disk*

Have you a collection of National Geographic magazines, collected over the years and often wished you had an index of articles? Well your wishes have been answered.

GLEANERS INDEX is an index of National Geographic articles, January 1957 through October 1990, to be searched, edited, and printed. Search for any keyword in the People, Place, Event, Animal, Vegetable, or Object categories. List the titles of all articles using the keyword as well as the volume, number, month and year of publication.

Or maybe you would like to make an index of articles in your valued computer magazines. GLEANERS INDEX works easily and permits new databases to be written.

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	Scott Hendry	245-1330	After-hours
AutoCad	Geoff Harrod	378-8534	Evenings,W/E
C Programming	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
	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	
Xenix	Paul Watts	892-2226	Mon-Sat a/hrs, Sun
	Mike Lester	274-4144	(343-5703 a/hrs)

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