

# Ottawa IBM -PC Users Group

BBS: (613)745-8015

# OPCUG

3 Thatcher St., Ottawa, Ontario K2G 1S6

General Meeting: 100 Sussex Drive, Ottawa  
(8:00 PM, last Wednesday of the month except July and December)

October 1987

## THE WHOLE BIT (TV SHOW)

Cable 12, 1st Tuesday of the Month at 10:00 PM

"The Whole Bit" is the name of a TV show produced jointly each month by Ottawa-area computer users groups and Skyline Cablevision. The show features a live phone-in on the show's topic, news items, technical tips, and so on.

The October show is titled "Imitations and Compatibles"; the November show is on the "Apple Macintosh"; and the December show on "Games".

Sandy Shaw is our club representative for the show, and asks for your assistance to provide news stories. Stories could be technical tips, game or program reviews, etc. If you have anything to provide, contact Sandy at 733-5088, 996-1392 or leave a message on the club BBS or Message Centre.

Following this program you might want to watch "Computer Chronicles" on channel 18 (PBS). This program runs every Tuesday at 11:00 PM.

## FIRST ANNUAL OPCUG COMPUTER EXCHANGE MARKET

The club is sponsoring its first swap meet on Sunday, November 1 between 1 and 5 PM at the RA Centre, 2451 Riverside Drive, Ottawa. Harry Gross is coordinating the event, and can be contacted at 733-7989.

This is your chance to exchange or sell that extra disk drive or software package, and to pick up some bargains from other club members. The club is providing the space at no charge to buyers/sellers, and the event is open to anyone.

## OPCUG MESSAGE CENTRE

The club has purchased an answering machine to provide information on upcoming events and general meetings, memberships, and to leave messages for the Executive. It is also a handy way to order library disks from Chris for pickup at the next meeting.

The telephone number is 723-1329.

## SCHEDULED EVENTS

Oct 6 The Whole Bit TV Show, Cable 12 at 10 PM  
Oct 21 Enable SIG meeting  
Oct 28 general meeting (topic to be announced), nominations for Executive positions will be accepted  
Nov 1 OPCUG Computer Exchange Market, RA Centre, 1-5 PM  
Nov 3 The Whole Bit TV Show, Cable 12 at 10 PM  
Nov 25 general meeting (topic to be announced), Executive elections will be held  
SIG meetings are held throughout the month on irregular dates. Please contact the SIG chairperson.

## GENEALOGY

Those of you interested in computer genealogy might appreciate the following information:

Ontario Genealogical Society  
40 Orchard View Blvd  
Suite 253  
Toronto, Ontario  
M4R 1 B9

Write to them asking for a membership application, and they will also put you in contact with the OGS chapter near you. There is a chapter in Ottawa.

There is also an excellent book on how to choose a software package for genealogy work:

"Computer Genealogy", Andereck & Pence, 1985, Ancestry Inc, P.O.476, Salt Lake City, Utah 84110

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## Executive

President	Anne Moxley	592-4933
Past President	Gord Hopkins	828-3834
Treasurer	Mike Luckham	832-3829
Secretary	Eric Clyde	749-2387
Membership Chairman	Claude Jarry	521-3366
Meeting Facilities	Stu Moxley	592-4933
Publicity	Harry Gross	733-7989
Software Librarian	Chris Taylor	723-1329
Software Assistant	John Ings	-----
Newsletter Team	Paul Baudet	824-2772
	Andr6 Cyr	561-5207
	Jackson Hibler	836-4863
	Mike Roy	744-0047
BBS Sysop	Bruce Miller	745-1151

## Next Meetings

1987: October 28, November 25

1988: January 27, February 24

Meeting are preceded by club's activities such as registration of news members and sale of public domain or shareware programs from the Club's library.

Location: NRC Auditorium,  
100 Sussex Drive, Ottawa

Bulletin Board (613) 745-8015 (for members)

OPCUG Message Centre (613) 723-1329

CLUB SERVICES DIRECTORY

SIG Chairpersons

PCjr	Tom Mimeo	828-9705
Enable	Bob Laidlaw	995-3708
PC/AT	Gord Hopkins	828-3834
Desktop Publishing	Mike Czirfusz	231-6000
Packages	Eric Clyde	749-2387

(Word Processing, Spreadsheet, Database)

## Newsletter Submission

The Newsletter team is welcoming contributions from members of the IBM P.C. User' Group. Articles should be submitted in hard copy as well as an ASCII file either on a diskette or downloaded through the Club's bulletin board.

The Newsletter team will like to hear from members who are interested in publishing regular columns on topics of interest to the user community.

## NEW DESKTOP PUBLISHING SIG

One of our newest club members is interested in forming a SIG on Desktop Publishing. If you are interested, please call Michael Czirfusz at 231-6000.

*Stock up now and save on DS/DD 5 1/4 inch floppy disks. Sold in boxes of 10, the disks come complete with labels and protective envelopes. Available during the club meeting for \$7 per box, including provincial sales tax. Or save even more by ordering your disks in advance at \$6.50 per box, including PST. For more information contact Terry Mahoney at 226-6332.*

## FLUSHING THE BUFFER

by Jackson Hibler

(Thinking about last month's feature topic)

Hugh Chatfield gives himself an unusual "nom de plume" on The Source: if I read the numbers quickly, then he is "one-to-foresee-for-(more than one)". And he certainly did give us a good look into the future of Computer Conferencing (CC).

CC started as a way of drawing together scattered people who shared a similar concern. You didn't have to come. You didn't have to be on time. You didn't have to shout to be heard. And you could always find out later exactly what that fellow over in the corner (or Corner Brook) was saying a while back.

Hugh "talked to guys around the world on quantum physics!" Others set up an international conference on plant pathology; a PC users group; a theatrical review; a club; a university. And these things are still going strong-not only on The Source and its corperitors, but indeed on our own BBS where our Sysop keeps 10 of the more popular FIDONET conferences available.

But why does he think CC is so revolutionary? "Because it supports a human learning experience that could not happen any other way." (I think he's right!)

So why aren't we all doing it? All you need, in addition to your computer, is a modem, telecom and word processing software, and access to a conference that you find interesting... Yep, it sure looks like we are going to need money! Money to buy the software and hardware. And money to pay for the phone line (the data bandwidth that these conferences use is becoming a price issue in the U.S.). Hugh says a carefully planned use of batch down- and up-loading can keep his online costs to \$10/month, sometimes. But it can hit \$100/month, sometimes...

We wondered about the reliability of the other participants; the lack of graphics, imaging and other forms of data sharing so useful to most group work; the lack of interconnections between similar conferences on different networks. Good questions! Good answers are still being worked on.

Obviously this isn't a mature process. But it certainly is an interesting one. Background reading can be found in the December 1985 issue of BYTE that featured CC. Besides The Source and Compuserve, the University of Guelph has a \$13/month CC system through DATAPAC. Then there's I-NET (Tel.# 737-7327) who are waiving their \$50 sign-up fee (!) till the end of October. Think I'll check out those FIDONET feeds on our own BBS first.

## Last Call

October Speaker

Microsoft will talk about "every thing you want to know" about OS2.

November Speaker

OMZIG will talk about communication, where we are now and where are we going...

## FILE LISTING

I will attempt to write on some aspect of computing in each issue of the Newsletter until the end of this year of operation. I will be writing for a two drive computer using diskettes which do not contain a Hierarchical Directory. Hard disk users know that they need only change "d:" or "B:" to "C:" and add a path to get the desired directory. On this occasion, I wish to cover the listing of files from a diskette to the screen using DOS, DR.COM and PCWRITE.

DIR is the usual DOS Command used to list all the files from a diskette with the size and the date and time of creation of the file. For a Hierarchical Directory and a hard disk the TREE/F Command could be better. A problem occurs when there are too many entries for a display screen. There are several DOS solutions and I would like to suggest the DR.COM utility and the PC-WRITE word-processor.

## DOS

The DOS common solution is to enter "DIR" with a switch (/) followed by one of two letters as explained below.

The switch can be used with the letter "W" for WIDE (/W). The list of file names five to a line without size etc, appears on the screen and often this is sufficient to see all that is desired.

The switch can be used with the letter "P" for PAUSE (/P). Now the filenames with the information on file size etc. are displayed one screen at a time with the phrase "Hit any key". Unfortunately the diskette label is not retained at the top of the first screen and, to hold it, one has to use Ctrl NumLock. After a screenful of entries, pressing any key will bring the one following. At the end of the last screen, there are two entries, one giving the total number of files and the other the number of bytes remaining.

A better DOS solution is to use the MORE Command: ADIR B: | MORE. The diskette label is retained at the top of the first screen. Hitting any key will bring the next screen. The number of files and of bytes free is given on the last screen.

An even more interesting solution is the SORT Filter Command of DOS: ADIR B: | SORT /+10 | MORE. This gives a list of the files on the diskette in drive B: sorted on the tenth character of filename i.e. the first character of the extension. The listing includes the number of files and that of bytes free. SORT Filter used the parameter "/+nn" to determine the column on which to sort. For a sort on file size the parameter would be "/+14"; for filename, the parameter would be omitted altogether. The "|" character is the filter character which in some publications (even in some cases in my DOS manuel) is given as "|".

Now consider the command: ADIR B: | SORT B:RID1.TXT. As you may know, this will read the directory of the diskette in drive B:, apply the (|) filter, SORT on the filename and redirect () it to drive B: where it will create the file RID1.TXT (DIR spelled backwards) and write in the sorted directory. The user can now use this ASCII file with EDLIN or his word-processor to add any comment he may desire.

## LISTES DE FICHIERS

Je voudrais préparer, pour chaque édition de cette lettre, un article sur l'utilisation d'un ordinateur pendant cette année d'opération. Mes textes se baseront sur un ordinateur à deux lecteurs avec des disquettes sans le Répertoire Hiérarchique. Les utilisateurs de disque dur savent qu'il leur suffit de changer 'd:' ou 'B:' à 'C:' et d'ajouter le Path pour arriver au répertoire désiré. Aujourd'hui, je veux traiter de l'affichage des fichiers d'une disquette à l'aide de DOS, de DR.COM et de PC-WRITE.

La Commande DIR de DOS s'emploie habituellement pour afficher chacun des fichiers d'une disquette avec sa longueur et la date et l'heure de sa création. Pour un répertoire hiérarchique ou un disque dur, la Commande TREE/F semblerait préférable. Il se présente un problème quand les fichiers sont trop nombreux pour un seul écran. DOS donne plusieurs solutions et je voudrais en suggérer avec l'utilité DR.COM et le traitement de texte PCWRITE.

## DOS

La solution habituelle de DOS demande l'emploi, après avoir taper DIR, du signe (/) suivi d'une de deux lettres tel que précisé ci-après.

Le signe peut être suivi de la lettre 'W' (/W) (WIDE en anglais) pour afficher les noms seulement, mais à cinq à la ligne. Souvent c'est tout ce qu'il faut pour donner satisfaction.

Le signe peut être suivi de la lettre 'P' (/P) (Pause en Anglais). Ainsi les noms sont affichés, mais cette fois avec la longueur etc, un écran à la fois avec 'Hit any key' dans le bas. Cependant le nom donné à la disquette disparaît au haut de l'écran et pour le retenir il faut presser Ctrl-Num-Lock. Après l'affichage d'un écran, un autre apparaît en pressant une clef quelconque. A la fin du dernier écran, deux inscriptions donnent l'une le nombre de fichiers et l'autre le nombre de caractères de l'espace qui reste.

Une meilleure solution est d'employer la Commande MORE: ADIR B: | MORE. Le nom de la disquette demeure au haut de l'écran. Une clef quelconque amène l'écran suivant. Le nombre de fichiers et les caractères disponibles sont inscrits au dernier écran.

Une solution encore plus intéressante, c'est la commande SORT Filter de DOS: ADIR B: | SORT /+10 | MORE. Cette commande affiche la liste des fichiers de la disquette du lecteur B: en ordre alphabétique selon le dixième caractère de filename i.e. le premier de l'extension. Le nombre de fichiers et les caractères restant sont inscrits. SORT Filter a employé le paramètre '/+nn' pour déterminer la colonne pour l'ordre. Pour un ordre selon la longueur du fichier, le paramètre serait '/+14'; selon le nom des fichiers, on omettrait le paramètre. Le caractère '|' est celui du filtre qui dans certaines publications (même dans certains cas dans mon manuel DOS) est inscrit comme '|'.  
Maintenant la Commande: ADIR B: | SORT B:RID1.TXT. On peut le savoir, cette commande lira le répertoire de la disquette du lecteur B:, utilise le filtre (|), fait le SORT selon le nom des fichiers et le redirige () vers le lecteur B: ou le fichier RID1.TXT (DIR renversé) est créé puis emmagasiné. L'utilisateur peut maintenant utiliser ce fichier ASCII avec EDLIN ou son traitement de texte pour ajouter tout commentaire.

Les utilitaires de DOS peuvent être merveilleux, mais il faut voir les deux programmes qui suivent qui sont TRES RAPIDES.

## DR.COM

Un bien meilleur outil pour afficher la liste des fichiers d'une disquette est de copier le programme DR.COM de la disquette No 43, celle du mois d'août, à la disquette employer pour lancer le système ou à toute autre disquette. Ce programme ne confie que 3370 caractères. C'est l'un des programmes que Chris Taylor a présentés à la réunion du mois d'août et qui vient de PC Magazine. C'est l'utilité la meilleure à mon goût pour examiner les fichiers ou les répertoires un écran à la fois tout en maintenant la lettre du lecteur dans le haut. Pour obtenir l'écran suivant, il suffit de presser PgDN et c'est si

The DOS features may be great, but consider the two programs which follow. Not only are they great, they are VERY FAST and include so many other facilities.

## DR.COM

A much better way of getting a listing of files on a directory is to copy the program DR.COM from the User Group Diskette, #43, to the root or any other diskette. The program is only 3370 bytes long. This is one of the programs demonstrated by Chris Taylor at the August meeting and came from PC Magazine. It is the best utility, I have come across, to view the listing of files or directories one screenful at a time, the first screen retaining the letter of the drive. When a screenful has been displayed, the next one will appear just by pressing PgDn and it is so FAST. It is even possible to travel back and forth by pressing PgUp or PgDn.

MUCH MORE convenient, this program enables the user to View (F1) any file one screenful at a time, Delete (F2), Rename (F3), Move (F4) or Sort by name (F7), extension (F8), size (F9) or date (F10), using the specified function key. For Delete, the user can toggle (F5) ON or OFF to confirm the action. Another toggle is (F6) used with WordStar files. To exit, one uses the Esc key.

When the program is called, the first screenful of files, sorted in alphabetical order of names, appears with the action of function keys in a table on the right.

The number of files is given on the last line, but the number of remaining bytes is not given. I will write about the number of bytes on a diskette in the next Newsletter.

## PC-WRITE

Another excellent method of listing files is to use the ED.DIR feature of PC-WRITE (a shareware word-processor available in the Users Group's library). This one is particularly good because it stops at a screenful and makes the right half of the screen available to enter personal comments or file descriptions using any number of characters and with more than 25 files on a diskette this feature helps to remember.

To obtain the directory after booting the system, the PC-WRITE diskette is placed in the "A" drive and the data diskette in the "R" drive. After the "A" prompt, one types "ED B:ED.DIR" and presses return. A better way would be to have this on a batch file. The Copyright screen appears and, following the instructions on the top line, one presses Esc for no backup. The listing appears on the next screen. A "+" sign follows each file name if this is the first time the feature is used. After the first use, the new files are listed at the top of the screen and a "=" sign is seen after files which have been deleted. The new files are moved in and those with a "-" are deleted. The cursor may be moved anywhere on the screen and particularly to the end of a file line where the additional description would be typed-in. The file could be sorted using the (F6) key.

To select a file from the listing: Press F1,F8 - Type B: on the top line - Press F6 - Press the down arrow to the desired file - Press Return - Press Esc and the desired file is on the screen.

RAPIDE. Il est même possible de remonter vers une page antérieure ou de descendre vers la suivante en pressant PgUp ou PgDn.

D'une utilité ENCORE SUPERIEURE, ce programme permet d'Examiner (F1) un fichier une page à la fois, Effacer (F2), Changer le nom (F3), Remplacer (F4) ou Ré-ordonner par nom (F7), par extension (F8), par longueur (F9) ou par date (F10), en employant la clef de fonction spécifiée, Pour l'effacement, la clef (F5) alterne l'usage de la confirmation et la clef (F6) alterne WordStar. La clef Esc permet de quitter le programme.

Le lancement du programme donne le premier écran de fichiers en ordre alphabétique du nom des fichiers et, sur la droite, un tableau des clefs de fonction et leur utilisation.

Le nombre de fichiers est donné sur la dernière ligne, mais le total de caractères ne l'est pas. J'ai l'intention d'aborder le sujet du nombre de caractères dans la prochaine lettre.

## PC-WRITE

PC-WRITE (un traitement de texte 'shareware' disponible parmi les disquettes du Groupe) offre, avec son programme ED.DIR, une excellente façon d'afficher les fichiers. Il est particulièrement avantageux parce qu'il donne un écran à la fois et permet d'inscrire sur la droite des commentaires personnels ou une description avec Je nombre de caractères désirés. Avec plus de 25 fichiers sur une disquette c'est un aide-mémoire précieux.

Pour obtenir le répertoire, on place la disquette PC-WRITE dans le lecteur 'A' et celle des données en 'B' après le lancement du système. A la suite du 'A', on tape 'ED B:ED.DIR' et on presse 'Return'. Une meilleure approche serait d'avoir un fichier batch. L'écran des droits d'auteur apparaît. Selon les instructions à la ligne du haut, on presse Esc pour enrayer le 'Backup'. Le répertoire s'affiche avec un signe '+' à la suite du nom de chaque fichier si c'est la première utilisation du programme. Aux utilisations suivantes, les nouveaux fichiers sont inscrits au haut de l'écran et un signe '-' apparaît dans le répertoire après le nom des fichiers éliminés. Les nouveaux fichiers seraient déplacés et ceux qui ont disparu seraient effacés. On peut déplacer le curseur à volonté et plus particulièrement à la fin d'une ligne où on peut inscrire la description voulue, Le fichier pourrait être réordonné en employant (F6) la clef de MOVE.

Pour choisir un fichier au répertoire: Passer F1,F8 - Taper B: à la ligne du haut - Presser F6 - Presser la flèche bas - Presser Return - Presser Esc puis le fichier désiré apparaît à l'écran.

Si on oublie le contenu d'un fichier, on peut presser F1,F4 pour obtenir un nouveau cadre de DOS et lancer DR.COM pour voir le contenu de ce fichier ou de tout autre. La Commande 'EXIT' de DOS ramène ED.DIR instantanément pour inscrire la description. Pour emmagasiner ED.DIR et effacer les signes '+' et '-', presser Ctrl-F1, inscrire B:ED.DIR au haut de l'écran, presser Return puis Esc pour retourner à ED,.DIR

## CONCLUSION

Si on s'arrête à étudier les deux programmes, on se rend compte qu'ils ne font que la même chose que les Commandes de DOS, mais les programmes sont plus RAPIDE, offre plus de facilités et sont d'un usage plus avantageux.

Ottawa IBM Users Group  
Computer Exchange Market  
Sunday, November 1, 1987  
1 P.M. till 5 P.M.  
RA Centre  
2451 Riverside Drive  
For more information  
Call Harry Gross 733-7989

If the contents of a file is not remembered, using F1,F4 will bring up another DOS shell where DR.COM can be called to view the contents of the particular or any other file. The DOS command "EXIT" will Instantaneously bring back ED.DIR where the description may now be entered. To save ED.DIR to file and remove the "+" and "-" signs, press CTRL-F1, enter B:ED.DIR on the top line, press Return and Esc to return to ED.DIR.

## CONCLUSION

When one stops to reflect on the two programs, one realizes that they only do the same as the DOS commands allow, but the programs are FASTER, offer more facilities and are more convenient to use.

## REVIEW

### The Norton Utilities

by Chris Taylor

This spring, Peter Norton released two major upgrades to The Norton Utilities, his well known collection of DOS enhancing tools. Since the first version, released in May 1982, there has been a constant improvement to the Utilities in power and ease of use. Version 4.0 enhances the 18 programs found in version 3.1, and adds 4 brand new programs. The Advanced Edition includes all the programs in version 4.0 and adds another 2 new programs and some significant improvements to the main program (NU.EXE).

The new documentation is excellent. The manual has grown from 64 pages (version 3.1) to 174 pages. It is written in the clear concise style I have come to expect from Peter Norton. There are 22 pages devoted to an excellent tutorial on unerasing files. One of the disks supplied with the Norton Utilities comes with erased files used in the tutorial. There is a single sector file, which is easy to UnErase and can be recovered with QuickUnerase. There is also a fragmented file which is trickier and requires the more powerful NU to recover. The trickiest is a fragmented file that had it's directory entry overwritten.

With the Advanced Edition comes an additional 35 page pamphlet entitled The Norton Disk Companion. It contains a wealth of information about how disks are structured and how DOS interacts with them.

As with previous versions, there is a quick reference guide and disk labels for your working disks.

These versions of the Utilities have been written in Microsoft C. Versions previous to 3.0 were in Pascal. Version 3 was in Lattice C. The change to Microsoft C was prompted by a greater flexibility in memory models and the advantages gained by using CodeView, Microsoft's fantastic debugging tool.

Help is available for every program simply by typing the name of the program followed by a question mark. All programs that can output more than a screenful may be paused simply by pressing the spacebar. Then, to advance a line, press Return. To advance a screenful, press any other key. Unfortunately, there is no keystroke which will defeat the pausing completely, once you have invoked it.

The utilities are colour smart. Any utility that provides a full-screen operation will sniff out the current video mode. If it is a colour mode, it assumes you have a colour

monitor and will come up in colour (white on blue). If the video mode is B&W, the utility will come up in mono.

Now for the details.

Ask (ASK.EXE) is new to the Norton Utilities. It allows you to create more powerful batch files. It is not quite as powerful as the public domain ASK on DISK- 38, but is quite functional. ASK will display a prompt and wait for a single keystroke from the user. The batch file can branch different ways depending on the key pressed.

Beep (BEEP.EXE) allows you to specify the frequency, duration, number of repetitions, and the time between repetitions. A new addition is the ability to read tones from an external file. A file that plays Mary had a Little Lamb is included on disk as a demo.

Directory Sort (DS.EXE) allows you to sort your directories by name, extension, date, or size. Order may be ascending or descending. The /S switch causes subdirectories to be sorted. As with most of the Utilities, DS has been spitted up. A full-screen operation now allows COMPLETE control over the order of the file. You can for example, have all the files in order by name and extension, but have a file called READ.ME listed first.

Disk Test (DT.EXE) attempts to read either the entire disk, sector by sector, or all files on the disk. With version 4.0, you can now mark any sector as bad (or reverse) and move doubtful data to safe sectors. You can also specify a wildcard group of files for test reading.

File Attribute (FA.EXE) allows you to examine or change the attributes (read only, system, hidden, and archive) of any file. You can now clear all attributes in one command. FA can be limited to the current directory or extend across all subdirectories.

File Find (FF.EXE) allows you to search for any file or directory (including wildcard specifications) across all subdirectories. FF returns the full path, filename, size, and date/time for all matches it finds.

File Info (FLEXE) is a new program. With it you can maintain a file which attaches comments to a regular directory listing. Comments can be up to 65 characters long. You can attach descriptions in a single command or, if you have many comments to add or change, you can enter FI/E and the first filename will pop up along with a box where you can enter or edit a comment. Pressing Enter will move you to the next file. While this is handy, I would have much preferred a fullscreen operation, where all files were listed and you could move around and edit comments at will. Once you have added comments to some filenames, typing F1 will present a directory listing with the file comments.

Format Recover (FR.EXE) will help you to recover from an accidental format of your hard disk. This is possible because PC-DOS (and most versions of MS-DOS) does not erase data when you reformat the hard disk. Only the directory and FATS are cleared. FR saves a copy of the directory and FAT and can recover them in the case of an accidental format. The downside is that FR can only return things to the state when you last ran the program. Believe me, this is no substitute for good back-ups. If you want to use FR and are using MS-DOS, find out if your version of FORMAT overwrites the entire disk or not.

File Size (FS.EXE) lets you know the size of your disk files and how much disk space they occupy. The files can be a specified group (as in \*.txt), an entire directory, or even a directory and all its subdirectories. You can verify if there is enough space on a target disk for the group of files.

List Directories (LD.EXE) will provide a list of your tree structure. New switches allow you to display the tree graphically (as in VTREE on DISK-26). Another switch changes the graphics display to one using - and + characters so you can print it on a printer that doesn't support the extended character set. You can also get a list of the number of files/bytes in each directory.

Line Print (LP.EXE) does a nice job of formatting files for printing. You can include page breaks and margins. New to version 4.0 is the ability to print EBCDIC files, send setup strings to the printer, and three header options; none, current time/date, and current time/date with file time/date. The last two options also include page numbers.

Norton Change Directory (NCD.EXE) is new to version 4.0. It provides a graphic representation of your directory structure on screen and allows you to add or delete directories. You can quickly jump to any directory. For even faster operation, from the DOS prompt simply supply the name of the directory you want to go to. You don't even have to supply the path or full name. If you have a directory named \comm\pd\games, "NCD G" will pop to it. If it goes to the wrong directory (e.g. \archive\games) then invoking "NCD G" again causes it to search forward for the next directory starting with g. Fantastic and quick. Combine this with a prompt of \$p\$g to display the current directory and you have a superb way to move around your directory structure quickly.

Norton Integrator (NI.EXE) is also new to version 4.0. With NI, you no longer have to hunt for your manual to run any of the Utilities. It presents a column at the left of the screen with all the Utility names in alphabetical order. You use the cursor keys to select a Utility. The right side is devoted to information on the selected utility, it's syntax and all option switches. You can run of the Utilities from within NI.

NU.EXE is the main program for the Norton Utilities. It is divided into three main options. Explore Disk allows you to search for text anywhere on your disk and examine/edit any sector or file on your disk. You may also save the contents of any sector or cluster to a disk file on any drive. Disk Information allows you to map out the space used on the disk, and get technical information about the disk. UnErase leads you through the steps necessary to recover files. NU is entirely menu driven, has context-sensitive help available, and is very easy to use.

The Advanced Edition adds some nice touches to NU. This version includes Directory, FAT and Partition Table editors in addition to the regular Hex and Text editors. You can manipulate absolute sectors. And for disks so badly damaged even DOS rejects them, you can start NU in a "maintenance mode", bypassing the logical structure of the disk, and work strictly at the cluster/sector level.

Quick UnErase (QU.EXE) will automatically recover most erased files. Version 4.0 has made things even faster and easier. You can now specify a filename

on the command line, even wildcards if you want. If QU doesn't do the job correctly, as it might not if the erased file was fragmented, you can use the added power of NU.EXE to recover the file.

Screen Attributes (SA.EXE) is used to set screen colours while in text mode. You can also set the blinking attribute or reverse video. The ANSI.SYS driver must be loaded for SA to work. A neat suggestion is to use SA to warn you of certain conditions. Many programs will set the batch file variable ERRORLEVEL to 1 if there was an error. Testing for this condition and specifying "SA BLINKING BLACK ON RED" will give a fast visual clue that things did not go right.

Speed Disk (SD.EXE) is only included with the Advanced Edition. It re-arranges fragmented files so that they are contiguous. It also places all directories at the start of the disk. Both of these actions speed access of files, sometimes dramatically. Also, contiguous files are much easier to UnErase. It shuffled 19.8 Mbytes on my 20 Mbyte hard disk (PC-Magazine BIOS seek test 69 msec, Norton SI Disk Index 1.4) in 40 minutes.

You don't have any control over the order files are placed on the disk. You have to leave it up to SD. SD does take care not to move any hidden files, hidden subdirectories or files within hidden subdirectories. This should ensure that any copy protection (YECH, YECH !!) schemes are not disturbed. SD can also recognize the Vault and Softguard copy protection schemes.

System Information (SLEXE) sniffs out your system and reports on the name of the computer, DOS version, total and available memory, and ROM-BIOS extensions (such as a hard disk controller). SI also performs a "computing index" which tells you how much faster (or slower) your computer is than an IBM-PC. Version 4.0 adds several functions. SI now reports on extended and expanded memory, the type of display adapter and video mode, processors on board, and ports. If you have a hard disk, SI will also calculate a "disk index" which compares your hard disk's speed to a stock IBM-XT, and a "performance index", a combination of the computing index and disk index. I am always happy to rattle off that my computer has a CI of 1.7, a DI of 1.4 and a PI of 1.6.

Time Mark (TM.EXE) provides 4 independent stopwatches. Use them to time the execution of programs or just to keep track of time spent doing a job. Output can be logged to a file. You can now add comments to be sent to the log file.

Text Search (TS.EXE) will search a given file specification (wildcards accepted), all the disk, or erased disk space. If the search was by file, TS will display any matches in context along with the path and name. If the search was of entire disk or erase! disk space, TS will display any finds in context along with the cluster and sector numbers. In this mode, TS will allow you to dump the contents of the sector to a file on another drive. You can use NU.EXE to find which file (if any) owns the sector.

Unremove Directory (UD.EXE) is required if you want to undelete a file that was in a subdirectory that has been removed. The file cannot be recovered until the subdirectory is reconstructed.

Volume Label (VL.EXE) creates a volume label or changes an existing one. VL allows upper and lower case to be used.

WipeDisk (WIPEDISK.EXE) overwrites all erased files or the entire disk. This is useful to protect sensitive data. You may specify the character used in overwriting the disk as well as the number of times the overwriting should occur.

WipeFile (WIPEFILE.EXE) overwrites all files matching a file specification. The file specification can contain wildcards. Switches include ones to include subdirectories, a wipe value, number times the file should be wiped, and an option to erase rather than wipe the files. New to version 4.0; wiped files also have their directory entries wiped.

I have been a fan of the Norton Utilities for a long time. I use Directory Sort every few days on my hard disk and on every disk I prepare for the software library. I run Disk Test at least once a week to ensure that my hard disk is not deteriorating. File Find is run almost daily due to my periodic lazy spells when I don't tidy up my work and file things correctly. File Info helps me keep track of the public domain/shareware software I gather for inclusion in the library. File Size helps me put together monthly disks that have exactly 0 bytes free. I use LP to print source code. NCD allows me to move very swiftly from one area of my disk to another. NI means I never have to reach for the manual to get the option switches on those infrequently used Utilities. NU is most often used to do byte level editing of files. QU has seldom failed to recover files for me. SA provides me with a bright yellow on blue screen. I run SD every few weeks to keep the file access times up and to make UnErasing easier. TM makes for a painless way of keeping track of time on paid jobs.

Although the basic function of many of the Utilities is available in the public domain/shareware market, I don't think you will find a finer collection anywhere. They are well polished and elegant. A novice will find them easy to operate and the expert will find them powerful enough. The operation and option switches are consistent across all programs.

To re-cap the differences between Version 4.0 and the Advanced Edition, the Advanced Edition has all the programs in Version 4.0 plus;

- Speed Disk,
- hard disk optimizer -
- Format Recover
- recover from an accidental hard disk format -
- Enhancements to NU.EXE

- Directory, FAT, and Partition Table editors, the ability to work with absolute sectors and a maintenance mode for working with damaged disks.

Prices from Peter Norton Computing: Version 4.0 -US\$99.95 Advanced Edition - US\$150.00. Upgrade from any previous version to Version 4.0 - US\$25.00 Advanced Edition - US\$39.00.

## TIDBITS

Some interesting little jewels picked up from here and there by Chris Taylor

### About the IBM PS/2

Rich Levandov, vice president of strategic operations says Phoenix could create a new BIOS in four months but adds it's probably not necessary yet. He says there's even talk that a new BIOS won't be necessary because OS/2 requires writing 'well-behaved' applications that make calls to the operating system and not directly to the hardware. - LOTUS magazine, June 1987.

The bottom line? For less money, you can take home a reliable AT clone offering faster processing and drive performance than the Model 30 ....That leaves the Model 30's wonderful display capabilities as the deciding factor. With the \$95 PS/2 mouse and a color analog monitor, the Model 30 is a great Windows machine. But if the graphics don't thrill you, shop elsewhere.

-PC Resource, August 1987.

The only way you can get more than 16 colors in a 640 by 480 mode is to make the step up to the 8514/A adapter (at US\$1,290) - PC Magazine, July 21 1987.

IBM has identified upwards of 100 intellectually protectable concepts in the PS/2 line. It may apply for patents or copyright protection on any or all of them, which will no doubt touch off a wave of lawsuits and counterclaims. In the meantime, however, it may become just plain illegal to clone a PS/2 machine.

- PC Magazine, July 21 1987

### About OS/2

'It's a joke. A million-and-a-half lines of code? What are they trying to do, put 'Star Wars' on a PC?' - Philippe Kahn, President - Borland Int.

Ironically, one of me few programs that do not run in the OS/2 DOS Compatibility Box is Microsoft Windows 1.03. It turns out that Windows has too intimate a relationship with undocumented DOS function calls. Bad, bad, bad. - PC Magazine, July 21 1987

### About "user friendliness" -

'You say that something is friendly only if you know that it is unfriendly, There is no such thing as 'user friendly' in this industry.' - William McAfee (who sells advertising for Byte magazine)

### About disk storage prices -

'We started at \$180 per megabyte. Now the high-capacity drives are \$10 per megabyte.' -Alan Shugart, Seagate Technology

### About nudes-on-line -

If you own a Macintosh and a modem, you can download portions of the current issue of Playboy... All the photos are produced by scanning and digitizing magazine pages and have the appearance of half-tone silkscreens. Stand back a few feet, squint, and, gee, they look almost real. - LOTUS magazine, July 1987

### About the popularity of the IBM-PC

'IBM did the worst job of market forecasting in the history of American industry-the story of Edsel in reverse. The result is the ultimate irony: IBM, the bastion of centralized computing, legitimized the concept of end-user computing, and did so accidentally.' - Marc Schulman, analyst with Salomon Brothers. (IBM's early estimates for TOTAL sales of IBM-PCs was 250,000)

*Why pay more for DSIDD 51/4 inch floppy disks? The club offers its members high quality disks, in boxes of 10, complete with protective envelopes and labels for \$7 per box at the door or \$6.50 if ordered in advance. For details, see or call Terry Mahoney at 226-6332.*

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