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NEWSLETTER

NORTH CAROLINA STATE GOVERNMENT PC USER GROUP

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NEXT MEETING

The next meeting of the PC User Group will be held at 10:00 A.M., Wednesday, November 4, 1987 at the SIPS Building, 3700 Wake Forest Road. The program will be an overview and demonstration of the software package ENABLE, a product of The Software Group. The presentation will be made by Mr. Bob Dortch of The Software Group. ENABLE is a package which contains a data base, word processor, and spreadsheet.

USER GROUP MEETINGS

The North Carolina State Government Users Group meets monthly on the first Wednesday at 10:00 A.M. at the SIPS Building unless there is a special presentation or demonstration.

WHAT KIND OF DTP DO YOU NEED?

While "desktop publishing (DTP)" is a hot buzzword right now, there are *four* different kinds of computer-assisted publishing available. What kind do you need? Read the descriptions below, they may provide you with an answer.

High-End Word Processing: If you want to create memos, letters, proposals, reports for internal corporate use, and newsletters which do not require much integration of graphics and text, you may not actually need full-fledged publishing software at all. In fact you may already have all the "publishing" capabilities you need, if you have a personal computer and a sophisticated word processing package such as Microsoft Word (from Redmond, Washington-based Microsoft Corporation) or Multi-mate Advantage (from Torrance, California-based Ashton-Tate).

Desktop Publishing (DTP): If you need to integrate graphics with text as well as have sophisticated editing facilities, you'll probably want to acquire a DTP package. Such software is designed to be used by an end user on a personal computer, and is usually easy to use, featuring pull-down menus and on-screen help. Most DTP packages are used to create documents for internal use, and are used as standalone applications by single users.

Corporate Electronic Publishing: If you need everything described under DTP but have to have multiple users work on the same document, you're now in the arena of corporate electronic publishing.

Corporate electronic publishing products allow multiuser capabilities, either by working on a local area network or because they're minicomputer- or mainframe-based. Often these packages are used by members of a company's advertising, corporate communications, or marketing department.

Dedicated Workstation Electronic Publishing: If you need very high quality output, for use in communicating with those outside your organization, you're in the realm of dedicated electronic publishing workstations. These setups, available from traditional typesetting services vendors, are generally used by specially-trained staff members rather than end users.

BUSINESS SOFTWARE REVIEW

Best Low-Tech Solutions To High-Tech Problems

- Affixing sheets of cardboard to a monitor as a hood
- Raising a monitor to eye level by stacking books beneath it
- Taping nickels to a Hewlett-Packard plotter to avoid ink smearing and uneven plotting
- Using business cards to keep add-in boards in place
- Using a paper clip to eject a diskette from a drive

STRANGEST PRODUCT NAMES (WHAT'S IN A NAME)?

- **ASK GOD** (Expansion Programs International) - A program that enables users to search the Bible for citations based on a user's queries.
- **PRECURSOR** (The Aldridge Company) - A hard disk menuing program.
- **GRAPH-IN-THE-BOX** (New England Software) - A RAM-resident graphing program.
- **BAKER'S DOZEN** (Buttonware) - A collection of 13 utility programs, including a mini-spreadsheet, file recovery utility, calendar program, etc.
- **CELL/MATE** (Clarity Software) - Checks for errors and displays formulae in Lotus 1-2-3 and Symphony.
- **BROOKLYN BRIDGE** (White Crane Systems) - Provides users with the ability to transfer software on 5.25-inch disks to 3.5-inch disks.
- **INTRACOURSE** (Intra Corp.) - A disk-based sexual therapy program.
- **SQUISH** (Sundog Software Corp.) - A RAM-resident utility program that compresses files and increases file space on floppy and hard disks.
- **BALLYHOO** (Infocom) - A text adventure game.
- **EUREKA: The Solver** (Borland International) - A scientific-equation solving program.
- **THE EGG** (Peregrine Falcon) - A scientific word processor that includes 500 chemical structures.
- **GLUE** (Solutions, Inc.) - Enables the transfer of graphics between most Macintosh applications; also provides print-to-disk capabilities.
- **CATSUP** (Applied Decision Technology) - A utility program that tracks Lotus 1-2-3 and Symphony worksheets.
- **Snap/Spark** (Quadram Corp.) - Laptop computers.
- **Twist & Shout** (Spectre Technologies) - A utility program for printing spreadsheets in a variety of formats.

MAKING YOUR WAY THROUGH THE UPGRADE JUNGLE

The administrative hassles of upgrading software in a large company often falls on the shoulders of the microcomputer manager and Information Center staff.

Although users may be eager to obtain the new version of software they have been using, IC managers want to know that the upgrade meets standards for functionality, usability, and compatibility. Of course, the cost of implementing an upgrade program must be considered. Once a budget is approved, further delays may arise from the mechanics of gathering the old disks and documentation, contacting the manufacturer, waiting for delivery, and redistributing the software to end users. Here is a list of other considerations customers often have.

Considerations for upgrading

- Does the new version provide a bug fix?
- Will the enhancements be useful to the user?
- Should I evaluate the upgrade? Is it compatible with other products in use?
- Must software be reinstalled? Will staff need training?
- Is the file format the same? Must old files be converted?
- Will registered users get notice of upgrade?
- Need I collect and destroy disks or documentation?
- What is the cost of the upgrade?
- Can I upgrade from 5 1/4" to 3 1/2" disk format?
- Are there upgrades from more than one earlier version?

All this effort eats up many hours of IC staff time. When all is said and done, it may take weeks or months to complete an upgrade through the manufacturer.

CORPORATE SOFTWARE UPDATE

**"BLESSED ARE THE PESSIMISTS:
FOR THEY HATH MADE BACKUPS"**

SIPS TRAINING SERVICES PRESENTS

INTRODUCTION TO MICROSOFT WORD

Hands-on course to learn how to use Microsoft Word to prepare letters, memos, reports, and tables. No previous experience with word processing is necessary. Participants will learn to enter text, make corrections, rearrange text, format documents, save and retrieve files, and print documents.

INTERMEDIATE MICROSOFT WORD

In this course you will learn to use some of Microsoft Word's more advanced features such as style sheets, columns, mail merge and sorting. In addition you will learn the Human Database Method, which is available only in this course, and will receive special files to use with this method. The human Database Method gives MS WORD users the ease of data entry and revision that is usually found only in separate data base or file management programs.

Date: Nov. 30, Dec. 1,3,4 1987

Time: 8:15 pm - 12:15 pm (Inter)
1:15 pm - 5:15 pm (Intro)

Cost: \$150 per student

Registration deadline: November 16, 1987

For registration or more information, please contact:

SIPS Training Services - 733-5555
Carol L. Coonley - Training Director

NEW AND ENHANCED FEATURES OF DOS 3.3

Throughout its six years of life, DOS has operated on a variety of systems beginning with the 256KB double-diskette-drive PC and now stepping up to the new 80386-based systems.

DOS 3.3 was introduced to provide support for the IBM PS/2 family, but it actually runs on the entire line of personal computers as well, including XT type, AT type, and portable computers. Although it is not the long-awaited multitasking operation system that can take advantage of the larger address space of the

80286 and 80386 processors, DOS 3.3 nevertheless has some new features that, if used carefully, are worthwhile. New and enhanced features introduced in DOS 3.3 are summarized in the following table.

CONFIGURATION COMMANDS

- **BUFFERS** - (Enhanced) - Default number tied to machine configuration
- **STACKS** - (Enhanced) - Default number tied to machine configuration

DOS COMMANDS

- **APPEND** - (New) - Directory search path for files
- **ATTRIB** - (Enhanced) - Subdirectories processed
- **BASIC** - (Enhanced) - Compatible with BASICA
- **BACKUP** - (Enhanced) - Performance improved
- **CALL** - (New) - Batch file subcommand calls another batch file
- **COMMAND.COM** - (Enhanced) - Fail option added to critical error processing message
- **DATE** - (Enhanced) - Set CMOS clock
- **FASTOPEN** - (New) - Caches file location information
- **FDISK** - (New) - Support added for multiple DOS partitions
- **FORMAT** - (Enhanced) - Added support for 1.44MB drive
- **GRAPHICS** - (Enhanced) - Convertible LCD and thermal-printer support
- **MODE** - (Enhanced) - Support added for COM3 and COM4; speeds up to 19.2 Kbps
- **RESTORE** - (Enhanced) - Performance and utility improved
- **TIME** - (Enhanced) - Sets CMOS clock

Some new features, such as support for multiple DOS volumes, improved BACKUP and RESTORE, and FASTOPEN, are welcome additions; others, such as APPEND and the DOS function call 67H (set handle count), must be used with extreme care.

PC TECH JOURNAL

JOURNEY THROUGH DOS, PART 1

First thing in the morning, you walk into your office and turn on your PC. Red lights blink, disk drives whirr, and every so often, a little beep pierces your concentration. After a minute or so, your PC, displaying an A or C prompt on the screen, is ready to use.

Whether or not you realize it, every time you use your PC, you are loading and using the operating system. In simple terms, an operating system is a layer of software that sits between you and your computer hardware. In the case of most microcomputers, you are using some version of Microsoft's Disk Operating System. Without DOS or some other operating system, your PC is a very large, very expensive paperweight.

This article, the first in a series, provides a glimpse behind the blink, whirr, and beep that greet you each morning. You'll explore how DOS operates and learn to put some basic but essential DOS commands to work for you. While this installment is geared to DOS novices, even veteran DOS users may pick up a tip or two along the way.

BOOT CAMP

Remember the first time you were told to *boot up* your computer? You mustered a puzzled look and braced yourself for a cascade of computer jargon. After learning that the phrase means to *turn on* or *start* your computer, you now use it freely.

The phrase *to boot up* actually derives from the old expression "to pull yourself up by your boot straps," which is essentially what your PC does when you turn it on. There are two ways to boot up the PC. The first, a *cold boot*, occurs when you flip the switch that turns on the power to the PC. (It doesn't matter whether the power has been off for a few minutes or a few months.) The second, a *warm boot*, occurs when the computer is already on and you restart it by holding down the Control and Alt keys and pressing Delete. A warm boot is often used when your keyboard locks up or your computer, for whatever reason, stops responding to your commands.

When you first turn on your computer, the hardware runs through a brief self-check called a power-on self-test, or POST. Once the POST is complete, the next series of steps loads DOS. The process for loading DOS is the same whether you do a cold boot and the hardware goes through a POST or whether you do a warm boot.

Your computer contains a certain amount of read-only memory (ROM), which is stored in a chip on the main system board. At this point in the boot-up process, the PC executes a small program called the bootstrap loader, which is stored in ROM. The bootstrap loader first checks drive A for a disk containing DOS. If drive A is empty, the program checks either drive B in a dual-floppy-disk system or the hard disk if one is present. Once the program locates

DOS, whether on a floppy disk or on a hard disk, the remainder of the boot-up process is the same.

Next the bootstrap loader loads the bootstrap program, which DOS uses to load itself and which is always located at the very first position on a disk. The bootstrap program checks the disk for the presence of two files named, for example IBMBIO.COM and IBMDOS.COM. (Note that the letters preceding BIO and DOS differ according to the type of DOS.) For the PC to boot up, both the BIO.COM and DOS.COM must be present. Because these are hidden files, which don't appear in a directory listing, you may be unaware of their presence on your disk.

Once the bootstrap program has loaded both the BIO.COM and DOS.COM files, control passes to the BIO.COM file. This file initializes any hardware attached to the PC, including printer interfaces, display screens, and the keyboard. As a result of this step, the lights on your disk drives blink, and disk drives spin, and if your printer is on, the printhead of your dotmatrix printer moves to the home position. The next step checks for the presence of an optional file called CONFIG.SYS. This file contains instructions that configure your PC system. For example, a CONFIG.SYS file might set up a RAM disk or instruct the PC that you want to access remote disk drives on a local area network.

After BIO.COM finishes configuring the hardware, control passes to the DOS.COM program. This program loads routines that control information being passed to and from the disk drives and peripherals such as printers and modems. After DOS.COM completes its function, it loads the file COMMAND.COM from the disk into memory. This file is the command interpreter program that serves as the interface between you and the rest of DOS and the PC hardware. Once loaded, the command interpreter checks the disk for the presence of an AUTOEXEC.BAT file, which is a special batch file that instructs DOS to execute a series of commands once the PC has finished booting. A typical AUTOEXEC.BAT file might prompt you for the current date and time, change to the 1-2-3 subdirectory on the hard disk, and automatically load 1-2-3. If no AUTOEXEC.BAT file is on the disk, the COMMAND.COM file places the familiar DOS prompt (A or C) on the screen and waits for you to enter an instruction.

COMMAND.COM not only provides you with the familiar DOS prompt but also allows you to access your files and peripherals and to execute a set of useful commands.

In next month's installment we will check some of the tools built into COMMAND.COM. These tools, known as the internal DOS commands, give you information about and control over your files.

A DTP GLOSSARY

With the increasing interest in Desktop Publishing you may find the following glossary helpful to be more conversant in the subject.

align - to line up characters or columns

baseline - the line on which capital letters sit in a horizontal line of text. The baseline is used as a reference point for aligning text vertically on the page

batch page makeup - using codes in the creation of electronic pages so that pages have the desired appearance when printed out. Compare "interactive page makeup" and "WYSIWYG"

bleed - to run an image to the edge of a page

bold face - type that is thicker than normal; used for emphasis

Camera-ready copy or artwork - text or graphics ready to be photographed for printing or reproduction

caption - a line of text explaining a photograph or illustration. Also known as "cutline"

clip art - pre-drawn images stored as files that can be imported into a page composition package. Also known as "graphics library"

composition - arranging copy and graphics on a

page and specifying its appearance, including type sizes and fonts

crop - to trim the edges of a photograph or other graphic element so that it fits the desired space on a page and has the greatest impact

cutline - see "caption"

dedicated workstation - in electronic publishing terminology, a specialized in-house typesetting unit, manufactured by companies like Compugraphics. Dedicated workstations are more sophisticated than PC-based DTP systems

desktop publishing (DTP) - using personal computers, page composition software, and printers to produce high-quality output. DTP systems are usually used by one person. Compare "electronic publishing" and "dedicated workstation"

dots per inch (DPI) - a measure of printer output resolution. Laser printers generally produce images at 300 DPI, while typesetters can produce at 1,200 DPI or higher. See "resolution"

electronic publishing (EP) - using micros, minis, or mainframes, page composition software, and printers to produce sophisticated output. EP systems are generally more sophisticated than DTP systems

and are designed to be used by several users

flow - to pour text into an assigned space in an electronic page. When parameters are changed, most DTP programs adjust the text so it re-flows from one column to the next on the page and onto succeeding pages

font - type of a single size and typeface

graphics library - see "clip art"

greeking - representing text by straight lines in an overall view of a page. Greeking is used to show text position only, when the user is trying to get an overview of page design

H & J - hyphenation and justification

hard copy - text and graphics printed out on paper

headline - the phrase or sentence which appears at the top of an article or story in a newsletter, magazine, newspaper, or other printed material. The headline is usually emphasized by bold face or italics, and is usually several points larger than the typeface of the text. Compare "subhead"

hyphenation zone - a user-defined area at the right margin of a column of text, wherein a word processing or page composition program places hyphens. Some programs

place hyphens automatically according to syllabification rules in the program's built-in dictionary; others highlight the zone and let the user place hyphens manually

image scanner - a device that scans text or graphic images and converts them into data that can be read by a computer. Compare "optical character reader"

input device - a mechanical device such as a keyboard, optical character reader (OCR), or scanner, which lets the user bring text into a personal computer or terminal. See "OCR" and "scanner"

interactive page makeup - using commands and menus to make the screen look like the page will look when printed out. Compare "batch page makeup" and "WYSIWYG"

italic - printing a font slightly slanted to the right. Used for emphasis

justification - aligning text to produce even margins in a column. Text can be justified left, right, or both left and right. Compare "ragged"

kerning - adjusting the amount of space between certain pairs of characters to improve the visual balance. Some letters are moved closer together while others are moved further apart. Some programs

allow kerning according to predefined routines stored in the program's memory; some allow the user to make adjustments manually on the screen; and some programs do not allow kerning at all

landscape - printing a standard page sideways on 8 1/2" x 11" paper. Compare "portrait"

laser printer - a very high quality output printer which uses a laser beam to create a high-resolution image

layout - the arrangement of text and graphics on a page

leading - the amount of space between one baseline and another, or between and around columns of text. Leading is measured in points

mouse - a handheld input device which lets the user move a cursor on the computer screen by rolling the mouse along the surface of a desk. Mice are very handy for creating and positioning graphics

optical character reader (OCR) - a machine that reads printed text, converts the text to ASCII characters, and feeds this information into your computer system. Compare "image scanner"

output device - a device such as a printer or plotter that takes data from the computer and prints it

out in a form that can be used by the user

page description language (PDL) - a device-independent software interface between the computer and printer which allows the creation of very high resolution output. A PDL is generally considered necessary only for very high quality output and not for documents for internal corporate use

pica - a measurement of type size. One pica equals 12 points or 1/6 th of an inch. See "point"

pixel - a single dot on the computer's monitor, which shows up as a point of light. Screen resolution is measured in pixels: the greater the number of pixels, the higher the resolution.

Stands for "picture element." See "resolution"

plotter - a device for creating printed graphic output such as charts and maps. A plotter uses data from a computer graphics program to instruct colored pens to move in various patterns across paper (or across sheets of acetate to create transparencies for presentations)

point - a measurement of type size. 12 points equals one pica; 72 points equals one inch

portrait - printing vertically on an 8 1/2" by 11"

page. Compare "landscape"

ragged - text that is not justified. Many publications use a "ragged right" style; that is, text that is justified at the left margin but not at the right

resize - to take text or graphics and dynamically alter its size or shape. Page composition programs often allow you to select a headline, for example, and change it on command from 18-point type to 24-point type

resolution - the quality of image produced by a printer or monitor. Printer resolution is measured in dots per inch; monitor resolution is measured in pixels. See "dots per inch" and "pixel"

roman - standard type style, unemphasized by italics or bold face

rule - a format line shown on a page in a word processing or page composition program which allows the user to set margins and tabs. The line does not actually take up space on the page and does not print out. Also a graphic design term referring to vertical or horizontal lines printed between or around columns, articles, or graphic elements

runaround - text which is adjusted to follow the contours of a non-rectangular graphic. See "skew"

sans serif - plain characters, without decorative embellishments. See "serif"

scroll bar - an on-screen mechanism usually consisting of an arrow in a vertical or horizontal bar; the user moves the arrow within the bar to move up, down, or across the document, thus bringing other parts of the document into view

serifs - embellishments on letters such as small curls and lines. Serifs were originally developed to make printed text easier to read. Fonts are either serif or sans serif. See "sans serif"

shadow - either bold face text or text that has a "shadow" image printed beside each letter

sidebar - a small article which accompanies a larger article

skew - to place text so that it wraps around a graphic element which is not rectangular. See "runaround"

soft font - a font contained in software

spread - two pages facing each other

style - refers to the different appearances available within a single font. Helvetica, for example, could be represented as romans, italic, or bold face.

style sheet - a set of instructions describing such details as page size, headline font and size, columns per page, habitually-used headings, and the like, stored electronically in a DTP program.

subhead - a miniature headline that subdivides an article into topical sections beneath the headline. Subheads appear in smaller type, and often a different font, than the headline. See "headline"

thumbnail - an overall visual representation of the finished page, often in miniature, usually without text or graphic detail. Since many DTP systems cannot show a full-sized complete page on the screen, the thumbnail view is provided so a graphic designer can see the overall balance of a page.

vertical justification - adjusting a document's leading so that columns end on the same line on every page.

WYSIWYG - "What You See Is What You Get." The ability of the program to display on screen exactly what will be printed out. Type sizes, fonts, styles, graphics - all of these elements look the same way on the monitor and on the hard copy. See "batch page makeup" and "interactive page makeup."

BUSINESS SOFTWARE REVIEW

