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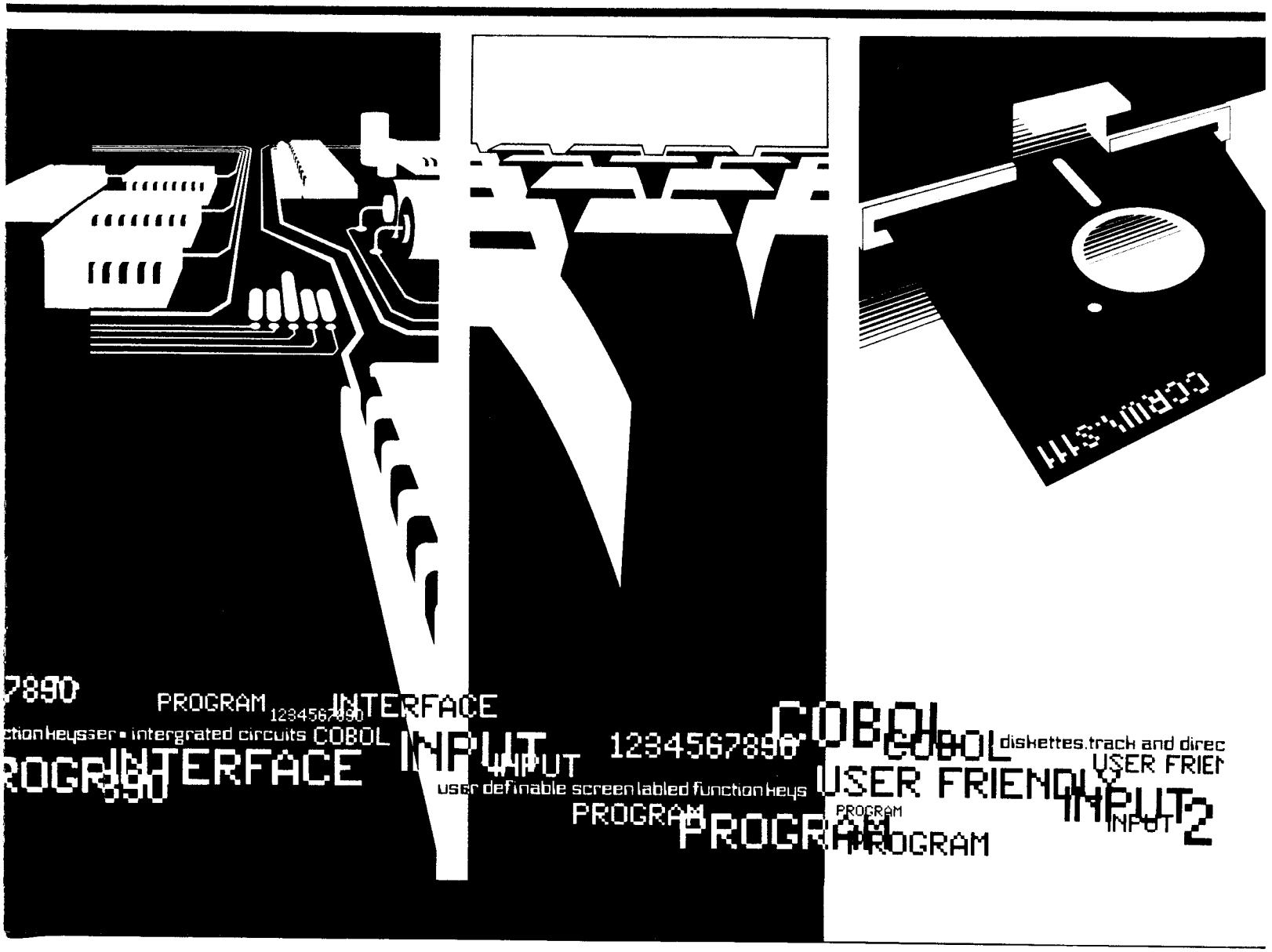

Research in Word Processing Newsletter

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How the Other Half Wordprocesses

John S. Lawrence

Review of Bonnie McDaniel Johnson & Ronald E. Rice, Managing Organizational Innovation: The Evolution from Word Processing to Office Information Systems. *New York: The Columbia University Press, 1987. 256 pages; illustrations, endnotes, bibliography, subject index. $35.00.*

Academic people who made early use of computer resources paid for the privilege with years of frustrating experiences. As word processors, for example, many of us went to crowded rooms where we competed with students for terminals. There we used crude editors to slowly enter material that was often interrupted by a system overload or permanently lost in a system crash. For many of us, this sort of main frame power wasn't worth it, so we sulked and tried to remain informed while we waited for something else.

Then the affordable Apple II and CP/M microcomputers came along, permitting marvels such as 40-column display with word wrap and permanent memory storage on disks that were unaffected by mainframe catastrophes. With the Apple's game-oriented keyboard and *Apple Writer* 1.0's slim 18K "Teditor" (vintage 1979), you could create seven single-spaced pages of text – all in upper-case with inverse video masks behind letters that you actually wanted capitalized.

The equally petite "Printer" file allowed you such niceties as underlining portions of your text, if you knew the codes for your printer and some of the relevant, undocumented lore about preventing *Apple Writer*'s tendency to lose its margins. In those times scholars who would otherwise have thought about higher things surrendered some of their best days in the twiddling and tweaking of their underlining tokens. CP/M users, who were able to use the more advanced *WordStar* with its legendary three-finger commands, lost days of equanimity as they tried to recover files that mysteriously disappeared in save operations at the moment a "Disk Full" message flashed on the screen. Although such experiences seem primitively sub-professional now, they were the route through which most scholars steered themselves away from mainframes and typing pools and thus became diverted from the problems and policies of community computing.

The varying individual levels of knowledge and of financial resources among academic people led them to bring an amazing variety of machines to their academic pursuits—Apples, Commodore 64s, Ataris, Osbornes, Eagles and then the IBM trailed by its hordes of compatibles. This foolish proliferation of operating systems often followed hard upon some political miscalculation of local mainframe administrators who had too zealously insisted upon control over all computing technology at their institutions. In retrospect, one can recognize the wisdom of their desire for less anarchy, but at the time they seemed too much like paranoid, heel-clicking tyrants.

As our restless experimentation and profligate investment helped to underwrite the microcomputer industry's journey toward more reliable and elegant personal systems, we often had fantasies about the business world. Some of us were partly convinced by the claim—likely to be advanced by the frowning trustees of our institutions at sessions where we learned why our salaries were so low—that bottom line necessities in business meant far better choice of equipment and training for its use. After you'd seen a few faculty people doing things like inserting disks from an Apple they'd bought for their office into a secretary's IBM (and wondering why it wouldn't work), you wondered whether we needed the business discipline that had been extolled to us.

The Johnson and Rice *Managing Organizational Innovation* is a fine book that shows us how computing applications were actually brought to the world of office work. Based upon telephone interviews, questionnaires, and literature review, this systematic study will correct many of our fantasies about the business world's assimilation of microcomputer technology. Life on the other side of the fence turns out to be a disarray of pleasing and repulsive realities. This book focuses on stages of development in the rapid, fluid evolution of word processing and the styles of management and work that accompanied it. Although it is primarily conceived as a contribution to management science in the sphere of office work, several sections will illuminate practices in the academic world—as well as dispel some common illusions about how intelligently businesses are run. To the extent that we academics affect office policy and act as technology policy makers in our institutions, we will find this book instructive in practical ways

One encounters several interesting historical sidelights in the book. One table, for example, summarizes "Events in Word Processing History" (p. 16), beginning with the telegraph (1844) and the lowly steel pen nib (1858) and extending through desktop publishing with low-cost laser printers (1985) and mass storage with CD-ROM devices (1986). But for me, the most easily grasped conceptual handle of the book lies in a topology of institutional word processing systems (developed in Chapter 4) that incorporates the following distinctions:

> Adoptive systems of word processing use WP "only to perform preexisting information work more efficiently." (p. 79)
>
> Adaptive systems "adopt" word processing as a tool of efficiency, but they also adapt "the innovation to add value to, or redesign, preexisting information work." (ibid.)

Within these main types they identify four different styles of WP innovation for the period of 1977 through 1985.

> In the "low integration system" (adoptive), WP is conceived as little more than efficient typing; supervisors pay scant attention to what happens and do not lead discussions about its use. Diffusion of expert knowledge occurs at the lowest organizational level in "pockets of cleverness," where users privately share their discoveries. Without training or rewards for adaptation to other tasks, many machines gather dust, irritate people by their clumsy presence, and in some locations, understandably increase the cost of producing documents.
>
> The "clockwork system" (adoptive) is far more earnest about its investment, herding its typists into pens or pools where output is carefully monitored, sometimes to the error rate-adjusted keystroke per minute. The emphasis in such a shop falls upon form-guided typing—form letters, charts, procedures, memos, dictation. Interaction with authors tends to be discouraged, as this impedes per line

productivity and leads to reprocessing of already completed keystrokes. In one documented case, typists were instructed not to inform clients about search-and-replace options. Employees in such an environment feel stressed, undervalued, underpaid for their skills, and are often screaming to escape. The sweat shop style of organization and longer retention of equipment produces cost effective, short terms benefits despite the human suffering.

In the "expanding system" (adaptive), there is an emphasis upon learning new applications for computers that will better serve the organization. Supervisors communicate with and collaborate with end users in the effort to provide better service as well as creating more productive uses of technology. Particularly since 1983, microcomputers have been used in this sort of system to complement mainframe data processing, often doing what central administrators cannot or refuse to do with the company mainframe. In the expanding system atmosphere, considerable discussion of WP technology takes place in the effort of administrators to continue the development of applications. Despite these more positive notes, Johnson and Rice found that most supervisors of "expanding

The "high integration" system (adaptive) is explicitly focused on continuous adaptation in the service of professional productivity. A high status line manager represents the needs and opportunities of WP and accepts responsibility for communicating about new uses of WP and for evoking participation in decision making about uses and procedures. Although there is an emphasis upon integrating as many institutional tasks as possible, the means of doing so tends to involve decentralization of management as well as equipment. A high value is placed upon the autonomy and initiative of operators as well as managers.

Using these categories as a basic framework, Johnson and Rice approach their subject from a variety of angles. Their telephone interviews have provided them with plenty of fresh, anecdotal statements to illustrate the themes of productivity, innovation, education, communication, stress, status, and mobility central to their book. In concluding chapters, they offer several normative principles for guiding office innovation. A sampling from chapter 7, "Adaptation in Word Processing" would include

- *involving people in change (p. 146)*
- *providing opportunities for continuous learning (p.148)*
- *encourage experimentation (p. 151)*
- *design work units to optimize communication (p. 153).*

In chapter 9, "Transforming Word Processing into Office Information Systems," they add principles such as promoting self-regulation of work groups through autonomy (p. 198), designing jobs so that people can perceive and complete a whole task (p. 199), and design jobs for upward mobility (p. 201).

While these may seem like truisms of good management, it is more important to see them in the context of word processing systems, where they will probably jar our drowsy perception of the strange way things are often done. To be honest, we all know that our own institutions do silly things that fall far below the level of the best practices. This book will provide academics with the sardonic satisfaction of realizing that businesses too often botch their technological innovations and engage in the poor management of human resources. But its real significance lies in providing some thoughtful and comprehensive models of WP innovation along with compelling empirical studies. If the management of WP at your institution concerns you at all, you should probably read this book. You may want to avoid, imitate, or adapt much of what you read about here.

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Bibliography Update

Bradford A. Morgan

ABCIS Desktop Publishing Solution Course. Farmington Hills, MI: ABC Information Systems, 1988. (video cassettes, workbook, diskette for *Ventura Publisher*)

Ahrenberg, Lars and Arne Jönsson. "An Interactive System for Tagging Dialogues." *Literary & Linguistic Computing.* 3:2 (1988), pp. 66-70.

Alderman, Eric. "*WordPerfect* Gets Better! *WordPerfect*'s Long-Awaited Upgrade Adds Desktop Publishing Features—Plus a Robust Macro Language, and Tools for Managing Large Documents." *PC World.* 6:9 (September 1988), pp. 108-113. (Version 5.0)

Anderson-Inman, Lynne. "Retooling for the Future: The Latest and Greatest Resources on Computer-Based Reading and Writing Instruction." *The Computing Teacher.* 16:1 (August-September 1988), pp. 24-27.

Archer, N. P. et al. "A Chinese-English Microcomputer System." *Communications of the ACM.* 31:8 (August 1988), pp. 977-982.

Banker, Stephen. "Designer *XyWrite*: *XyWrite III Plus* Is the Easiest of Word Processors to Customize. Here's How." *PC Computing.* 1:2 (September 1988), pp. 174-176, 179.

Brodda, Benny. "Tracing Turns in the London-Lund Corpus with *BetaText.*" *Literary & Linguistic Computing.* 3:2 (1988), pp. 94-104.

Brown, P. J. and M. T. Russell. "Converting Help Systems to Hypertext." *Software: Practice & Experience.* 18 (February 1988), pp. 163-165.

Brunet, Etienne. "Hugocentric Tendencies or Can One Approach Hugo Counting Words." *Literary & Linguistic Computing.* 3:2 (1988), pp. 79-93. (in French)

Burnard, Lou D. "Report of Workshop on Text Encoding Guidelines." *Literary & Linguistic Computing.* 3:2 (1988), pp. 131-133.

Campbell, Brad and Joseph M. Goodman. "*HAM*: A General Purpose Hypertext Abstract Machine. The *HAM* Is a Transaction-Based Server for a Hypertext Storage System. The Server Is Designed to Handle Multiple Users in a Networked Environment. The Storage System Consists of a Collection of Contexts, Nodes, Links, and Attributes That Make Up a Hypertext Graph. The Versatility of the HAM Can Be Illustrated by Showing How *Guide Buttons*, *Intermedia webs*, and *NoteCard FileBoxes* Can Be Implemented Usings Its Storage Models." *Communications of the ACM.* 31:7 (July 1988), pp. 856-861.

Cavuoto, James. "Network Publishing Systems Begin to Come into Their Own." *EP&P: Magazine for Electronic Publishing & Printing Professionals.* 3 (May 1988), pp. 42-45.

Cook, Vivian. "Designing a *BASIC* Parser for *CALL.*" *CALICO Journal.* 6:1 (September 1988), pp. 50-67.

Crabb, Don. "Product Comparison: Word Processors in Integrated Software." *InfoWorld.* 10:35 (August 29, 1988), pp. 31, 34-35, 38-40, 42. (reviews of *Enable 2.0*, *Framework II-1.1*, *Open Access II-3.10*, *Smart Software 3.10*, *Symphony 2.0*, and *Microsoft Word 4.0*)

Cummings, Steve. "*PageMaker*: Staying Ahead." Macworld. 5:9 (September 1988), pp. 214, 216. (version 3.0)

Dahlgren, Kathleen. *Naive Semantics for Natural Understanding.* Hingham, MA: Kluwer Academic, 1988.

Dennis-Strathmeyer, Jeffrey A. "A *ZyIndex* User's Report." *The Lawyer's PC.* 5:24 (September 15, 1988), pp. 7-11.

Ditlea, Steve. "*WordStar* Goes Professional: This New Release of the Old Standby Means That *WordStar* Users Can Stop Apologizing." *PC Computing.* 1:2 (September 1988), pp. 134-137. (*WordStar Professional, Release 5*)

Dunn, Si and Connie Dunn. "Business Basics Begin with Word Processing: There Are Hundreds of Choices in Word-Processing Software. How Do You Find a Winner in the Crowd?" *Computer User.* 7:10 (September 1988), pp. 1, 51.

Durbrow, Eric. "Atari & Amiga Publishing, Part Two." *Personal Publishing.* 4:9 (September 1988), pp. 82, 90-92.

Finley, Michael. "Check Your Grammar at the Door: Are Spelling and Grammar Checkers Substitutes for the Real Thing? Not Yet?" *Computer User.* 7:10 (September 1988), pp. 26-27.

Frederking, Robert E. *Integrated Natural Language Dialogue: A Computational Model.* Hingham, MA: Kluwer Academic, 1988.

Gralla, Preston. "Buyers' Guide: Desktop Publishing. Macintosh or PC. It Depends on What You're Publishing." *PC Week.*. 5:37 (September 15, 1988), pp. 59, 64-84.

Gubernat, Susan et al. "Talking Type: An All-Star Team of Designers and Typographers Convenes for a Candid Roundtable on the State of Digital Type." *Publish!* 3:9 (September 1988), pp. 34-43.

Haggard, Thomas R. "*ZyIndex*: A Search Alternative for Hard-copy Junkies." *The Lawyer's PC.* 5:23 (September 1, 1988), pp. 10-11.

Har, Roger et al. "Mac Word Processing: And Then There Were 3." *InfoWorld.* 10:26 (June 27, 1988), pp.53-56. (reviews of *Full Write Professional 1.0, Microsoft Word 3.02,* and *Word Perfect 1.0*)

Harmon, Daniel E. "*WordStar 2000 Plus, Release 3, Legal Edition.*" *The Lawyer's PC.* 5:24 (September 15, 1988), pp. 1-6.

Hartley, D. S. *Computer-Aided Research.* Springfield, VA: National Technical Information Service, 1987, 21pp.

Heather, M. A. and B. N. Rossiter. "Specialist Dictionaries in Electronic Form." *Literary & Linguistic Computing.* 3:2 (1988), pp. 109-121.

Heid, Jim et al. "Review Portfolio: *Pagemaker 3.0, WordPerfect 5.0, Manuscript 2.0, Microsoft Pageview, Total Word, Officewriter 6.0, Page Perfect.*" *Publish!* 3:9 (September 1988), pp. 49-58.

"Intelligent Grammar Corrector Introduced by Digital Equipment Corporation." *TypeWorld.* 12:16 (Second August), p. 10. (review of Houghton Mifflin's *CorrecText* in the Computer-Aided Proofreading series)

Jaekel, Carl C. and Barry A. Schaeffer. "Desktop Publishing Is a Valuable Tool, Not a Panacea." *Government Computer News.* 7 (June 24, 1988), p. 75.

King, Steve. "*Reference File* – A Personal Best: *Reference File* Provides Some Amazing Popup Database Capabilities at a Bargain Price." *Databased Advisor.* 6:9 (September 1988), pp. 90-91. (terminate and stay resident program)

Kochan, Barbara. "How to Handle Children's Spelling Mistakes on the Microcomputer?" *Education & Computing.* 3:3/4 (1987) pp. 219-222. (case study)

May, Albert L. "*Overdrive*: Add-On Automates Repetitive Document Assembly Tasks: Package Has 75 Pre-Made Templates." *InfoWorld.* 10:27 (July 4, 1988), pp. 51-52. (works with *WordPerfect*)

McGrew P. C. and W. D. McDaniel. "Why Not Publish on a Mainframe?" *Computerworld*. 22 (April 25, 1988), P. S11.

Milic, Louis T. "Stylistics from Mainframe to Microcomputer." *Literary & Linguistic Computing*. 3:2 (1988), pp. 122-124.

Molla, Steven R.; Alton F. Sanders, and Ruth H. Sanders. "Artificial Intelligence in a German Adventure Game: Spion in *PROLOG*." *CALICO Journal*. 6:1 (September 1988), pp. 9-23.

Moore, Phyllis. *Illustrated PageMaker*. Plano, TX: Wordware, 1988.

Olds, Henry F., Jr. "*Wordbench*." *Computer Classroom Learning*. 9:1 (September 1988), pp. 26, 28, 30. (review of word processing for high school writers)

Paris, Cynthia L. " 'You're Not Telling Us What To Do': The Ideological Contexts of Teachers' Introduction to Word Processing." *Education & Computing*. 3:3/4 (1987) pp. 163-168.

Perez, Ernest. "*Ize*: Connections Made Clear with Textbase Package: Tool Lets Users Step Back and See Patterns Buried in Database." *InfoWorld*. 10:32 (August 8, 1988), pp. 59, 62.

Picarille, Lisa and Linda Bridges. "Xerox Puts Professional Twist on *Ventura Publisher* Upgrade." *PC Week*. 5:34 (August 22, 1988), pp. 1-8

"*Publish!* 1988 Desktop Publishing Buyers Guide." *Publish!* 3:9 (September 1988), pp. 63-138.

Raymond, Darrell R. and Frank Wm. Tompa. "Hypertext and the *Oxford English Dictionary*: Hypertext Databases Can Be Produced by Converting Existing Text Documents to Electronic Form. The Basic Task in Conversion Is Identification of Fragments. We Illustrate That This Is Not Always a Straightforward Process with an Analysis of the *Oxford English Dictionary*." *Communications of the ACM*. 31:7 (July 1988), pp. 871-879.

Rubinsky, Yuri and Philip L. Lehman. "Markup Language Creates Blueprint for Style, Format." *Government Computer News*. 7 (June 24, 1988), p. 73-74.

Sans, John C. *Handbook of Desktop Publishing: A Guide for Business and Professional People*. Plano, TX: Wordware, 1988.

Segal, Hillel et al. "*WordPerfect 5.0*: A Giant Set Up—Or Is That Quicksand Ahead." *Executive Computing*. (August 1988), pp. 1-7.

Seymour, Jim and John C. Dvorak. "Powerhouse or Powderpuff? What's All the Ruckus about *Microsoft Word*." *PC Computing*. 1:2 (September 1988), pp. 24, 26.

"Simplified Word Processing Programs: For IBM, Compaq, Tandy, and Other Compatible Personal Computers." *Software Digest Ratings Report*. 5:7 (July 1988), pp. 1-75. (Reviews of *Q&A Write*, *Textra*, *Professional Write*, *IBM DisplayWrite Assistant*, *Einstein Writer*, *PC-Write*, *DAC Easy Word II*, *Volkswriter Deluxe Plus*, *Webster's New World Writer II*, *Easy Extra*)

Smith, John B. and Stephen F. Weiss. "Hypertext." *Communications of the ACM*. 31:7 (July 1988), pp. 816-819.

Solomon, Robert. "*Anword*: A Word Processing Case Study of Software Engineering in *Pascal*." *The Journal of Pascal, Ada & Modula-2.*, 7 (May-June 1988), pp. 18-33.

Timacheff, Serge. "Product Comparison: Postscript Laser Printers. *InfoWorld* Reviews Nine Solutions for Producing High-Quality Text and Graphics." *InfoWorld*, 10:22 (May 30, 1988), pp. 41-42, 46-50.

Updike, John. "Dale's Prayer." *PC Computing*. 1:2 (September 1988), pp. 186-191. (excerpt from the novel *Roger's Version*)

Walden, Jeffrey. "Very Professional: *FullWrite Professional 1.0*." *Macworld*, 5:9 (September 1988), pp. 206-208.

Wallkenbach, John. "*Grandview*: Rich Outliner Adds Extensive Word Processing." *InfoWorld.* 10:25 (June 20, 1988), pp.70-74.

Walkenbach, John. "*Reference File*: Pop-Up Database Provides Instant Access to Information." *InfoWorld.* 10:32 (August 8, 1988), pp. 63-64.

Wallkenbach, John. "*Manuscript 2.0*: Word Processor Winner for Office Environment. Sophisticated Package Incorporates Commanding Features." *InfoWorld.* 10:28 (July 11, 1988), pp. 54-55, 58.

Warren, Eda. "Improve Your *PageMaker* Typography: Word & Letter Spacing Controls." *The Page.* No. 20 (August 1988), pp. 12-14.

Warren, Thomas L. "Readers and Microcomputers: Approaches to Increased Readability." *Technical Communication.* 35:3 (August 1988), pp. 188-192.

Watson, Jim. "Database Activities in a One-Computer Classroom." *The Computing Teacher.* 16:1 (August-September 1988), 21-23, 50.

Will-Harris, Daniel. "Processing More Than Words: These Days Word Processors Are Really Word Publishers." *Personal Publishing.* 4:9 (September 1988), pp. 95, 98-100.

Williamson, Mickey. "*Houdini* Helps Users Escape from Complex, Unorganized Data." *PC Week.* 5:35 (August 29, 1988), pp. 70, 74.

"Word Processing Update: *WordPefect 5.0.*" *Software Digest Buyer's Alert.* 5:7 (July 1988), pp. 1-6.

"Word Processing Update: *Lotus Manuscript 2.0.*" *Software Digest Buyer's Alert.* 5:8 (August 1988), pp. 1-6

Manuscript Submissions Welcome

The *Newsletter* welcomes article submissions that pertain to word-processing, text-analysis, and research applications in professional writing situations, either corporate or academic. Also, hardware and software reviews are encouraged, but please contact Dr. Jim Schwartz, Hardware/Software Review Editor, before submitting them (call Jim at 605-394-1246). Manuscripts should be submitted on MS-DOS 5¼" floppy disks using Aldus *PageMaker*, XEROX *Ventura Publisher*, *WordPerfect*, *Microsoft Word*, or standard ASCII format. The Editors reserve the right to edit manuscripts if necessary. If you want your disk returned, please send enough postage to cover the return cost along with a self-addressed mailer. Address all correspondence to the Editors, *Research in Word Processing Newsletter*, South Dakota School of Mines and Technology, 501 E. St. Joseph, Rapid City, SD 57701-3995. Jim may also be reached on CompuServe (70177,1154).

Hard Disk Utilities, DOS Shells, and Disk Optimizers

Mauro G. Di Pasquale, M.D.

Hard disks are no longer a luxury, they're a necessity, but they do require getting used to. Because of its large capacity, the hard disk introduces organizational problems—it's easy to mess one up unless you give a lot of thought to setting up your directories, subdirectories and files. Fortunately, there are a number of excellent programs that make the use of the hard disk easier and allow the necessary housekeeping to be done almost painlessly.

DOS Shells

The first program you should get for your hard disk is a hard disk management program (often called a DOS shell). These programs streamline DOS functions and allow you to work faster and better. DOS purists may prefer to work with the cryptic DOS commands, but for most people these disk management programs make life just a little easier.

There are dozens of hard disk management programs on the commercial and shareware market—and a few outstanding ones. Most of the programs will list the files on your hard disk directories and subdirectories, and allow you to tag the ones you want to copy, rename, delete, or transfer. Many will allow you to view text and program files, and some include a built in text editor, allowing you to create text, search and replace, and perform other basic word processing functions. A few programs, like *PathMinder* and *X-Tree Pro*, are full featured, with text editors, printing functions, and file retrieval functions.

I tried out many hard disk management programs before deciding on the one I now use. *X-Tree Pro*, *PathMinder*, *Newsweep* (similar to the CP/M *Newsweep*), *Q-DOS II*, and dozens of others (including programs like *PC Tools*, which is a multi-purpose utility with DOS shell features) all have their followers, but I prefer the *Norton Commander*. Why?

Because it's easy to use, is loaded with features, has a built in editor, and has an excellent intuitive interface. And since I'm a devoted mouser, another big plus for the *Norton Commander* is its excellent mouse interface.

With the *Norton Commander*, copying, moving, deleting, and searching files is easy and fast. You can display both the directory (or disk) you're working on and the one you want to copy or transfer files to, making the whole process more visual than with other file managers. Tagging and untagging files is a matter of either pressing the insert key or pressing the right mouse button. Changing directories is as easy as tagging files. Although liberal use is made of the function keys, you don't have to memorize which ones do what—they're conveniently coded at the bottom of the screen. And the *Norton Commander* doesn't lock you in; the DOS prompt is always there so you can format a floppy disk, or enter any other DOS command directly.

Although the *Norton Commander* is a first-rate program, it's not perfect. The built-in editor could use more features, and it should have some printing capabilities. And the program should have some way of tallying up the size of the files you tag. As it stands, if you want to copy files onto a floppy, you have to manually figure out if all the files will fit onto the disk. If you need these features, then you might prefer either *PathMinder* or *X-Tree Pro*, but I truly doubt if you

would trade the extra features for the ease of use.

Unfortunately, the more you use programs like the *Norton Commander* to move, copy, and delete files, the more fragmented your hard disk gets. As the files become more fragmented your hard disk's access time increases and its performance decreases. Fortunately, there are several programs on the market for defragmenting the files on your hard disk (rearranging them in contiguous order) and thus optimizing disk access.

Disk Optimizers and Defragmenters

The best disk optimizing and defragmentation program that I've ever seen was one that IBM developed but did not market. This program went under several names, the latest being *DVOO*.

The purpose of *DVOO* was to speed file access by reordering the data on the disk/diskette in order to reduce head movement. Its many functions included:

§ All subdirectories were defragmented and relocated to low disk space to reduce search times.

§ All subdirectories were compressed by removing entries for erased files and any resulting unneeded clusters were freed.

§ All subdirectory entries in the root directory and in all subdirectories were moved to the top of the directory and all entries for erased files were removed. For system disks the 5 files IBMBIO.COM, IBMDOS.COM, COMMAND.COM, CONFIG.SYS, and AUTOEXEC.BAT were defragmented and moved to low disk space for a faster BOOT—useful if SYS or RESTORE has relocated the system files making a disk unbootable.

§ All files were defragmented.

§ All free space was collected into one contiguous region.

None of the other commercial (such as *Disk Optimizer*) or shareware (such as *DOG*) programs came close. However there are several programs which match some, but not all, of the features that were found in *DVOO*.

Vopt, by Golden Bow Systems, like *DVOO* but unlike *Disk Organizer* and *DOG*, is extremely quick, safe (virtually crash proof even in the case of power interruptions), and simple to use. *Vopt*'s remarkable speed in reorganizing a hard disk is due to use of a "best fit" algorithm, which guarantees that no file will be moved unless the move will result in a real improvement in overall disk organization. The first time I used *Vopt* it took ten minutes to reorganize my 20M hard disk. The second time (a few weeks later) it only took a few minutes, while the third time (a week later) it only took a minute. Used on a daily basis (as part of your autoexec file) *Vopt* takes less than a minute to defragment and optimize my hard disk.

Vopt defragments files and makes them and any remaining space contiguous, thus allowing improved access time—and it does this well. As a bonus, Golden Bow has included several useful hard disk, and diskette, management and assessment utilities. For under $50.00 *Vopt* is a bargain.

While quick and easy to use, however, *Vopt* doesn't go far enough in optimizing the subdirectories (although it does compact the disk directories) and doesn't rearrange the files on the hard disk so as to further speed up file access.

Some of the all-purpose utilities, such as *Mace Utilities*, *Norton Utilities Advanced*, and *PC Tools* now offer file defragmentation and disk optimizing features.

Mace Utilities' UnFRAGMENT has both the advantages and disadvantages of *Vopt*. Unlike *Vopt*, *Mace Utilities* gives you some choices as to how you want the disk optimized. You can choose to unfragment only (very fast) or to unfragment and close up spaces (takes more time).

PC Tools Deluxe is a remarkable bargain at its discounted price of around $50.00. In fact, *PC Tools* may be the only utility you ever need for organizing and running your hard disk. It contains many of the features of both the *Norton Utilities* and *Mace Utilities*, has a *Fastback*-like backup feature, as well as being able to defragment your files and optimize your hard disk.

Of interest for this article is *PC Tools*' Compress feature. Actually, the name Compress is misleading since it doesn't really compress the data in a file (as do programs such as *Squish*, *Cubit*, and *Squeeze*, which function by "shrinking" strings of like characters) but instead compresses the files on a disk/diskette such that each file, and all remaining space, are defragmented into contiguous areas with the files at the front of the disk/diskette and all free space at the back. In this way Compress functions much like *Vopt*, although *Vopt* was quicker and slicker. However, Compress, goes one step further than *Vopt* by rearranging the physical order of the disk files, in an automatic attempt to maximize disk access.

The *Norton Utilities Advanced* offers Speed Disk, which like *PC Tools Deluxe*'s Compress, attempts to optimize the order of the files on your hard disk as well as unfragmenting files.

Unfortunately, none of the above programs gives you the control needed to fully optimize your hard disk because none of them allow you to specify the location of your files on the hard disk (although some programs will rearrange a disk by placing all subdirectories before all files, by optimizing files for a faster boot – as *DVOO* does, and by optimizing the categories of files – by rearranging the .bat, .com, and .exe files in order of their original starting cluster, and sorting the remaining files by date).

If, for example, you could specify that you wanted the frequently used files located in low disk space, the overall performance of your hard disk could be further improved. The programs that come closest to this ideal are the ones in the *Norton Utilities Plus* and *PC Tools Deluxe*.

Recommendations

Which program should you choose? It all depends on what you're after. *Vopt* seems the most foolproof, is easily the fastest, and is the least expensive – although it doesn't give the best optimization. The optimization programs found in *PC Tools Deluxe* and the *Norton Utilities Advanced* not only give you maximum optimization (compared to the other programs that I am familiar with) but as a bonus you get several other useful utilities.

Software Reviewed

Mace Utilities
Paul Mace Software, 400 Williamson Way, Ashland, OR 97520.

PC Tools Deluxe
Central Point Software, Inc., 9700 SW Capitol Hwy./#100, Portland, OR 97219.

The Norton Commander
The Norton Utilities Advanced
Peter Norton Computing, Inc., 2210 Wilshire Blvd. #186, Santa Monica, CA 90403.

Vopt
Golden Bow Systems, 2870 Fifth Avenue, Suite 201, San Diego, CA 92103.

Contributing Editor **Dr. Mauro G. Di Pasquale** may be reached for questions or comments at 23 Main Street, Warkworth, Ontario, Canada K0K 3K0.

November NCTE Convention in St. Louis

The annual convention of the National Council of Teachers of English will be held November 18-23, 1988, in St. Louis, Missouri. Concurrent session topics include Computer-Assisted Writing, Across the Curriculum and the Writing Center (Junior High) Conversing, Composing, Computing: Collaboration around the World (General) Computers in Writing: From Assignment to Publication (Junior High) and Computers: Thinking, Interacting, Revising (College). One-day workshops include Conversing, Composing, Computing: Collaboration around the World (General) and Computers in the Writing Classroom (General). Contact NCTE, 1111 Kenyon Road, Urbana, IL 61801.

1989 Conference on Corporate Communications

The Second Conference on Corporate Communications will be held at Fairleigh Dickinson University on May 1989 in Madison, New Jersey. Proposals for papers, sessions, workshops (300-500 word abstracts) were accepted until October 10, 1988. Topics being sought included desktop publishing and the impact of networks on communications. Proceedings will be published. Contact Dr. Michael B. Goodman, Department of English/Communications, Fairleigh Dickinson University, Florham-Madison Campus, 285 Madison Avenue, Madison, NJ 07940, or call (201) 593-8710.

Desktop Publishing Conferences in Various Cities

The American Management Association will introduce desktop publishing in a series of repeated upcoming conferences in various cities: Chicago (November 10-11, 1988), New York (December 1-2, 1988), San Francisco (March 2-3, 1989), Washington, DC (April 2021, 1989), Chicago (May 1-2, 1989), and New York (June 15-16, 1989). Contact the AMA, P.O. Box 319, Saranac Lake, NY 12983, or call (518) 891-0065.

Presenters Sought for 1989 Education Conference in Arizona

The ninth annual Microcomputers in Education Conference, entitled "Interactive Technology: Unlocking Education's Connection to the Future," will be held March 6-8, 1989, in Tempe, Arizona. All educational levels, from K through Ph.D. will be addressed. November 15, 1988, is the deadline for 60-minute presentation applications. Contact Maurene Miller-Gerson, Co-Director, Microcomputers in Education Conference, AMF-Community Services Center, Arizona State University, Tempe, AZ 85287-0908, or call (602) 965-7363.

1988 CAUSE Conference in Nashville

November 29-December 2, 1988, will be the site of the 1988 CAUSE National Conference in Nashville, Tennessee. The theme is "Information Technology: Making It All Fit." CAUSE is especially interested in the administration of campus-wide computing and networking. Contact CAUSE, 737 Twenty-Ninth Street, Boulder, CO 80303, or call (303) 449-4430.

Call for Papers: Artificial Intelligence Conference

The 11th International Joint Conference on Artificial Intelligence, or IJCAI '89, will be held August 26, 1989, in Detroit, Michigan. December 12, 1988, is the deadline for four-to-ten page single-spaced papers on some aspect of AI, including applications to text processing, scholarly research, and desktop publishing. Contact Dr. N. S. Sridharan, FMC Corporation, Central Engineering Labs, 1205 Coleman Avenue, Box 580, Santa Clara, CA 95052, or call (408) 289-0315.

Conference on Document Processing Systems

The Association for Computing Machinery will host its Conference on Document Processing Systems in Sante Fe, New Mexico, on December 5-9, 1988. Contact the ACM, 11 West 42nd Street, New York, NY 10036, or call (212) 869-7440.

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