DATA BASE MANAGEMENT SOFTWARE

A data base management program, in the broadest sense of the term, is any program that:

Facilitates the storage of massive amounts of information in a data base.

Provides commands for sorting, searching, creating views, and printing the contents of the data base.

TEXT-ORIENTED DATA BASE MANAGEMENT

Not all data base management programs are designed to handle extensive amounts of text. Data base management programs can store, organize, and retrieve three kinds of information, and most specialize in just one or two:

Quantitative data such as serial numbers, census data, sales figures, part numbers.

Graphic images such as maps, diagrams, illustrations of parts, X-rays, or computer-created images.

Text such as correspondence, bibliographic citations, research notes, or the full text of scientific or technical articles.

Most of the data base management programs on today's personal computer market are designed to deal with quantitative data (with limited amounts of text), and for good reason: that's where the market is. Businesses make many uses of quantitatively oriented data base management programs for such matters as maintaining inventories, updating mailing lists, and storing customer records. Although these programs are well suited to business applications, they tend to place restrictions on the amount of text that can be stored (a typical limit is about 1000 characters per electronic "index card"). They're of little use, therefore, for scholars. Graphics-oriented data base management programs may appeal greatly to those who wish to maintain data bases of illustrations, maps, or charts, but they're only now becoming available for personal computers. Our concern, therefore, is with text-oriented data base management programs: programs for the storage and retrieval of large amounts of textual information.

A TYPOLOGY OF TEXT-ORIENTED DATA BASE MANAGEMENT SOFTWARE

Text-oriented data base management programs, defined in the broadest possible sense, can be said to include word processing programs, free format information storage and retrieval programs, text-oriented file management programs, and idea processors.

WORD PROCESSING PROGRAMS

It's possible to use a word processing program's search function for simple information management purposes, but it's not recommended if other alternatives are available. You can use the word processing program, for instance, to create a data file, and the search function will help you find portions of the file in which a specified word or two appears. You're given no tools, however, for more advanced searches using logical operators, for sorting the data base, or for printing a selection of records.

FREE-FORMAT INFORMATION STORAGE AND RETRIEVAL SYSTEMS

A free-format information storage and retrieval system (FFISR) lets you see a word processing program to set up your data base. Two kinds of FFISRs are now available for personal computers: *automatic indexing* and *controlled vocabulary* programs.

Automatic Indexing FFISRs

Automatic indexing FFISRs let you create a massive data base that includes as many as several thousand distinct text files, each created with a word processing program. The program automatically indexes every significant word in the whole data base, with the exception of unimportant "noise words" such as article or prepositions. As they create the index, they note where the word is located.

Automatic indexing FFISRs represent the ultimate in free-format data base management. No restrictions are placed on how the material is written up; the software can put an article, a chapter from a book, a loosely organized file of research notes, and a set of bibliographic citations and abstracts into the same massive data base. Furthermore, no special preparation of the word processor-created manuscript file is necessary; you simply tell the program which files you want indexed, and away it goes.

How, then, does the program distinguish one data record from another? It doesn't: automatic indexing FFISRs treat the data record concept arbitrarily. One program (FYI 3000) considers a paragraph of text as a unit, and shows you retrieved paragraphs. Another (ZyIndex) takes a whole disk file as a unit, and shows you the beginning of the file in which the information you want is stored. Pressing a button takes you to all the screenfuls of text in that file in which the search terms you entered are mentioned.

ADVANTAGES. Automatic indexing FFISRs are exceptionally easy to use. Unlike controlled vocabulary FFISRs (see below), you don't have to worry about making up controlled vocabulary key words or putting

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> "'The program is designed to allow brainstorming—or what I call prewriting—by throwing boxes up on the screen, typing text into them, and then drawing lines to show association,'" says Jay David Bolter, a University of North Carolina Classics professor who is programming the product.
>
> Outline processors have a basic problem, Bolter said. They constrain, forcing the writer to organize in a progression. Storyspace permits hierarchical structure and enables the linking of nonsequential thoughts through 'paths' that can be drawn with a mouse.
>
> These features also permit the program to be used as a reader for nonsequential fiction, Bolter said."

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> *"**Hypertext** is the term coined by computer guru Ted Nelson to describe the process of linking data in a manner more flexible than the linear-sequential paths associated with traditional data management techniques. For example, if the text of an encyclopedia entry were on the screen, a hypertext program would let you delve deeper into one of the concepts presented—e.g., by calling up a pertinent illustration, referring to a related encyclopedia entry, or listening to a pre-recorded sound associated with the topic—without actually leaving the online encyclopedia." (p. 53)*

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> "*Hyperties can be used to scan organizational policy manuals, a tool for diagnostic problem solving, an environment for novels or mysteries, an online help strategy, a browser for computer program text and documentation, an addition to a museum exhibit, cookbooks or self-help manuals, or a way to explore cross referenced materials such as legal documents or an annotated Bible.*" (p. 5)

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> "*Macintosh and PC environments currently use one language to generate the screen display and another (a page-description language) to describe image out to a printer. As a result, the user never truly 'sees' what the printer will produce,*" but "*Computer systems likely to hit the market next year may use only one language, such as Display PostScript, to write to both the system's screen and a printer—making true WYSIWYG possible.*"

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Conference: User-Oriented
Content-Based Text and Image Handling

On March 21-24, 1988, the Massachusetts Institute of Technology in Cambridge, MA, will host RIAO 88 User-Oriented Content-Based Text and Image Handling conference with presentation of prototypes and operational demonstrations. RIAO 88 is being held to demonstrate the state of the art in information retrieval, a domain that is in rapid evolution because of developments in the technology for machine control of full-text and image databases. This evolution is stimulated by the demands of CD-ROM full-text publishing and general access of information databases.

Seventy-five papers will be presented, many accompanied by demonstrations of prototypes. In addition, there will be twenty-one demonstrations of operational systems, having been selected according to their links with recent research. Contact RIAO 88-CID, MIT Conference Services Office, Room 7-111, 77 Massachusetts Avenue, Cambridge, MA 02139, or call Karen Daifuku at (202) 944-6252.

Humanities and Technology: Call for Papers

The Humanities and Technology Association will hold its 12th annual Interface '88 conference on October 20-21, 1988, in Marietta (metro Atlanta), Georgia. One-page abstracts of papers, panels, and presentations are being sought by May 1st on various social, political, philosophical, curricular, and related approaches to interdisciplinary applications in the humanities, science, and technology, including word processing. Contact Rex Recoulley or Susan Morrown, Department of Humanities and Social Sciences, Southern College of Technology, Marietta, GA 30060, or call (404) 424-7202.

Call for Papers: International Humanities Conference

On June 6-10, 1989, the Association for Literary and Linguistic Computing and the Association for Computers and the Humanities will sponsor the 16th International ALLC Conference and the 9th ICCH Conference at the University of Toronto in Ontario. October 15, 1988, is the deadline for 1,000-word abstracts of possible papers covering all aspects of computer-aided work in the humanities, including proposals for panel discussions and software demonstrations.

Papers are invited on all aspects of computing in linguistics, ancient and modern languages and literatures, history, philosophy, art, archeology, and music, including ■ authorship studies ■ bibliography ■ computer-assisted instruction ■ computer-assisted language learning ■ computerized dictionaries ■ corcordances ■ content analysis ■ database ■ grammar development systems ■ historical simulation ■ humanities computing centers ■ lexicography ■ lexicology ■ literary statistics ■ machine translation ■ natural language processing ■ prosodic studies ■ quantitative linguistics ■ scholarly publishing ■ speech analysis ■ stylistics ■ teaching humanities computing ■ textbase ■ text generation ■ text enrichment and ■ writing instruction.

Contact Prof. Ian Lancashire, ALLC-ICCH Conference, Centre for Computing in the Humanities, University of Toronto, Toronto, Ontario M5S 1A5, Canada, or call (416) 978-4238.

Small Computers in Libraries Conference

Chicago will the site of SCIL 1988, *Small Computers in Libraries* magazine's conference on March 7-9, 1988. In addition to a wide range of micro-based applications, sessions on word processing will include ■ Desktop Publishing on the Mac ■ Hypertext and the HyperCard ■ Optical Publishing and the Campus Network ■ A Supermicro-Based Multilingual Online System ■ Making Your Own CD ROM ■ Public Domain Software on a CD-ROM. On March 6th, six 3-hour workshops will be presented, including ■ Create Your Own CD-ROM ■ How to Build a Database with a Micro and ■ Desktop Publishing: Getting Underway. Registration for the 3-day conference will be $98.00. Contact Nancy Melin Nelson, SCIL'88 Chair, Meckler Corporation, 11 Ferry Lane West, Westport, CT 06880, or call (203) 226-6967.

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