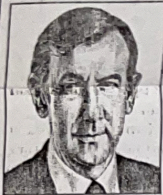


## APPLIED INTELLIGENCE

## CD ROM: A Cost-Effective Text-Management Solution



JAMES MARTIN

To become a true corporate asset, text must become readily accessible to departmental users on disparate LANs. CD ROM technology may be the most cost-effective and reliable vehicle for delivering that access.

As the cost of

CD ROM drives continues to decrease—the current price fluctuates between \$500 and \$700—the number of installed drives in corporations is growing exponentially; today there are approximately 200,000 CD ROM drives installed, and that number is projected to swell to 350,000 by 1992.

The number of CD ROM applications is also on the rise. For example, Lotus Development Corp. offers Prompt CD, a collection of technical-support notes, evaluation and demonstration versions of selected software, press releases and full text from Lotus Magazine. Computer Library, produced monthly by Ziff-Davis Publishing Co., contains full text from its family of computer publications, as well as full text and abstracts from 120 other periodicals.

There has also been a surge in the number of successful in-house corporate CD ROM publishing ventures, again heightening the credibility of the technology. Each month, a division of Ford Motor Co. publishes a CD ROM-based inventory list of 300,000 parts for its 2,400 dealers. Compaq Computer Corp. stocks its resellers with QuickFind, a CD ROM tool used as a source for technical support, product research and technical training.

The major benefit for adopting CD ROM is its significant storage capacity—the medium can maintain 660M bytes of information per disk. This capacity, the equivalent of 1,500 floppies or 250,000 pages of print, lets organizations store vast amounts of text and images on a CD ROM disk, providing access to that

and erasable optical disks—are not hampered by this restriction.

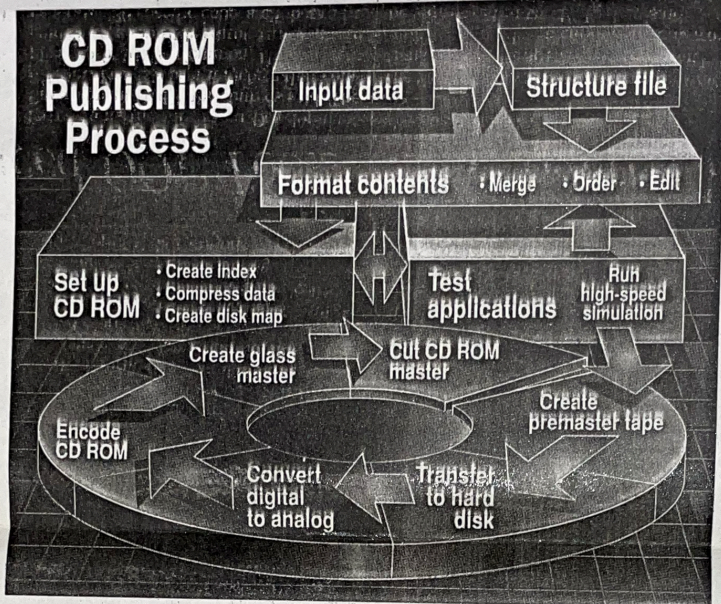
WORM disks, which hold about 600M bytes of data, are written with specialized drivers and are primarily used as archival media. Any spot on a WORM disk can be written to once, but it can never be erased. WORM drives have de-

yet to gain general acceptance.

The most important aspect of storing documents on CD ROM is the retrieval of relevant information from large text bases. Hypertext links can be incorporated into some information sources to boost search mechanisms. However, most CD ROM products only offer an index search such as full-text inverted indexing.

This method, which lists every word used in the collection, is easily automated. Inverted indexing does require that the user have an understanding of the vocabulary used in the collection and a working knowledge of Boolean logic. Still, the search engine must be optimized for CD ROM access: Although a CD ROM disk can hold 100 times more information than PC database software, the retrieval time is 10 times slower than on a hard disk.

Preparing text for CD ROM publishing involves many processes. An authoring process gathers the text collection and prepares it for transfer to disk. The text is then indexed, and a premastering step converts the text and index files into a CD ROM format. An optical disk master is then created and replicated for distribution. Mastering an optical disk costs around \$1,500—which usually includes the replication of about 100 disks. Incremental disks can run as low as \$2 each. ■



John Avakian

text with specialized search engines.

The major disadvantage of CD ROM is that the information contained on disk cannot be changed, nor can the disk itself be used more than once. Consequently, CD ROM is not an ideal medium for all applications, particularly if a text collection requires frequent updating.

Other optical-disk options—WORM

disks, which are considered more stable than earlier models and now offer retrieval performance acceptable for on-line access to databases.

The erasable optical disk, sometimes called the rewritable optical disk, can be written to and reused. Its use is similar to a hard disk; however, this storage category is still in its infancy and has

The concepts in this article are described in a new volume, "Text Management," in The James Martin Report Series. For more information on this volume, call (617) 639-1958. For information on seminars, contact (in the United States and Canada) Technology Transfer Institute, 741 10th St., Santa Monica, Calif. 90402 (213) 394-8305. In Europe, contact Savant, 2 New St., Carnforth, Lancs, LA5 9BX United Kingdom (0524) 734 505.

## Pascal \ Enhanced OOP Tools

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matically generates, with no written code, such advanced functions as resizable overlapping windows, pull-down menus, dialogue boxes, scroll bars, radio buttons and mouse support, they explained.

"Turbo Vision makes it easier for the programmer," said a source familiar with the Turbo Pascal upgrade. "It gives you all the programming components plus the handling of the events."

In addition to Turbo Vision, Borland is also bolstering the performance of Turbo Pascal by adding a smattering of user-requested enhancements, the sources said.

"I recompiled a program under Turbo Pascal 6.0, and the size was almost literally half of the original—from 16K to about 8K," said a beta tester of the new release. "That probably means that the executable file will be up to 10K smaller on most 300K programs."

Turbo Pascal 6.0 also features a spruced-up set of integrated utilities re-

ferred to as the Integrated Development Environment (IDE), the sources said. The IDE now boasts a user interface that complies with IBM's Common User Access guidelines, a multifile editor, the ability to generate 286-specific code, a clipboard facility to cut and paste code, and a hypertext help system.

Borland officials declined to discuss specifics of the new release. "We are committed to the evolution of Turbo Pascal," said Gene Wang, general manager of Borland's language business unit, in Scotts Valley, Calif. "It is the easiest language [with which] to learn object-oriented programming techniques, which is the programming of the '90s."

The Turbo Pascal upgrade should help Borland hold its favored position in the Pascal market, industry observers said. Turbo Pascal has enjoyed great popularity among users, outselling Jensen & Partners International Inc.'s TopSpeed Pascal and Microsoft Corp.'s QuickPascal to become the de facto standard, they said. ■

## SMK \ Easing Migration to OS/2

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the SMK lets developers augment applications with OS/2-specific features such as multiple threads—a capability that won't be supported in the BCL, they said.

Compared with a full port—which is rewriting a Windows application for OS/2 from scratch—the SMK's greatest asset is the speed with which developers can move Windows applications to OS/2—sometimes in a matter of days, developers said.

"Last time it took us maybe six months to bring over all the dialogues from Windows to OS/2," said Mike Sherwood, product manager at Aldus Corp., the Seattle-based maker of the PageMaker desktop-publishing software. "Now I can use the SMK to [rapidly] bring over the look of Windows to OS/2, and then go back and add value to my product."

Microsoft's forthcoming BCL may be a better solution for developers not experiencing immediate customer demand for

OS/2 applications, Sherwood said, since it is still unclear when the BCL will debut.

"For people who don't have the time or interest to add any value to their applications for OS/2, the Binary Compatibility Layer meets their needs," he said.

In some cases, it makes sense to do a full port to OS/2, developers said. For example, networking or multimedia applications that depend on the underlying operating system or applications that were poorly engineered under Windows might profit from being rewritten from scratch, they said.

Still, others feel they can get better performance by engineering an application for OS/2 from the ground up. "We don't have any interest in any type of quick and dirty port," said Bob Romney, president of Zenographics Inc., an Irvine, Calif., graphics software vendor. "When we get around to finishing our OS/2 development, we'll examine how to exploit OS/2 properly."

The SMK will be available from Microsoft of Redmond, Wash., as a \$150 upgrade to the Windows 3.0 Software Development Kit. ■