

METAFILE

A database system and word-processing module in one program

BY JOHN LOMBARDI
Contributor

Integrated is the computer buzzword of 1984. The term *integrated software* basically means that there are two or more applications operating within the same program, sharing information freely among themselves and using more or less compatible command structures. Integration, however, turns out to be more difficult to achieve than to describe. If the integration succeeds, the combined applications should work as well as comparable stand-alone products.

Metafile, from Sensor-based Systems, offers a two-application integrated package that includes a full database system and a word-processing module within one program. Our evaluation of this product covers all three elements: the database, the word processor, and the integrated system that they together provide.

The Metafile database offers a powerful microcomputer database system that is comparable in features and complexity to dBase II. Metafile works with information consolidated into files, each containing a series of records. Each of those records contains a uniform number of individual items of information, or fields. Not only does each record contain the same number of items as other records in the file, but also individual items contain the same type of information from record to record. You can visualize this system as a rectangular table with the records seen as the rows and the fields as the columns.

Metafile version 7.0 can handle files of about 65,000 records each and is limited by the amount of disk space available. This presents no problem with a hard disk, but, of course, limits the size of a database on a computer using only floppy disks. Records can have a maximum of about 1,000 characters of information arranged in a maximum of 250 fields. An individual field must be less than 235 characters. Each file is limited to a total of either 5 million characters or the capacity of the disk being used, whichever is smaller. These limits clearly indicate Metafile's substantial data-handling capabilities.

All this data can be handled in two

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ways. Metafile permits you to directly use all the capabilities of the program such as data entry, query, manipulation, sorting, and reporting. All you need do is type or select a command and Metafile will execute the appropriate operation. Although this method is quick and easy, it doesn't allow you to build complex database applications because Metafile won't remember the sequence of commands you

used during a previous sitting.

There is, however, a way to save a series of commands for later use. Called procedures, these are sequences of Metafile commands stored in a text file. You can recall the file from storage and execute the commands, as they are a program of instructions. If you carefully combine procedures and direct instructions, you can use Metafile to create very complex and substantial database applications such as personnel, accounting, or billing systems.

The procedures are the best way for you to use Metafile's large number of commands to rapidly and effectively manipulate information in up to five files at a time. You can combine, extract, select, calculate, choose, report, and display results using procedures. The Metafile language lends itself to the construction of functional modules that, when connected together, do the work of an application. You can quickly build complete systems that include menus, specialized screen displays, messages, and error handling using this command language. Metafile offers a number of helpful menus and features of its own to facilitate the process, including very extensive display and screen-handling capabilities, as well as a command to create sound.

Compared to dBase II, Metafile is considerably easier to use, somewhat more powerful, and faster. This is the case both when you issue commands directly and when you use the procedures. The database has many menus, special screen displays, selection options and messages that lead you through its operations. The system permits a secondary window to be active so you can look at the contents of one file while working on another. The quality of the menus and screen displays makes the lack of extensive on-line help less noticeable.

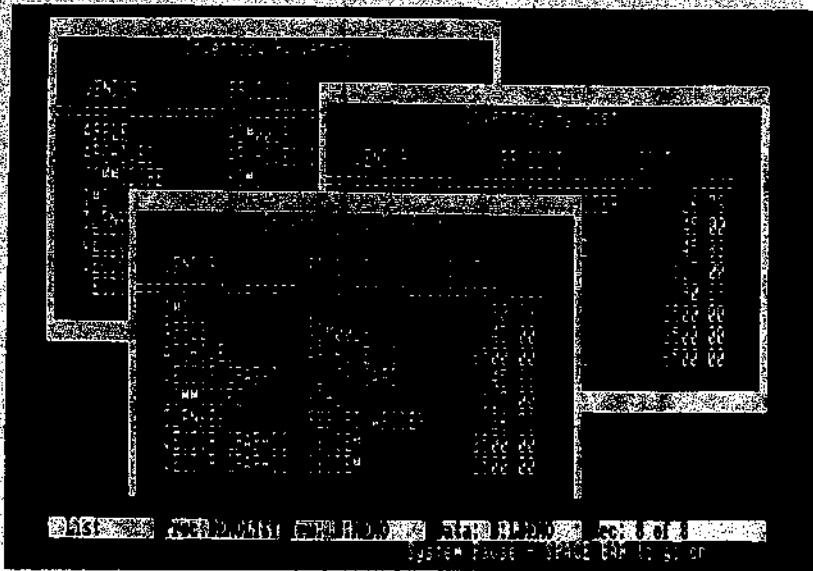
Metafile is called an integrated package because it includes a competent text-management module that can be used as a modest word processor. This module is more effective as a tool with which to edit your Metafile procedures. You can edit text in "frames" that show 80 characters on each of 22 lines (though the full length of a line can extend to 250 characters). Text as long as 64,000 characters can be edited at any one time if your computer has sufficient memory.

The editing functions of this text

	Poor	Fair	Good	Excellent
Performance	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ease of Use	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Error Handling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Summary: Metafile is a comprehensive database-management system with text-management capabilities. It has power and flexibility, but cannot be used with a serial printer and may be limited by the space of a diskette-based system.

Product details: List price, \$995. Available for IBM PC or PC XT, Compaq or other 100%-compatible machines running DOS 1.1 or 2.0. Requires 128K random-access memory; one 320K or 360K floppy and a second drive (either hard or floppy); RS-232 serial port; parallel printer; color/graphics display optional. Other versions available for CP/M systems. Published by Sensor-based Systems, Olmstead Federal Building, Chatfield, MN 55923; (507) 867-4440.



Using Metafile, you can build systems with menus, specialized screen displays, and other features.

manager include a reasonable array of features, though the complexity and power of these commands do not approach those of the major microcomputer word-processing programs. The text manager can wrap words (that is, automatically put words that don't fit at the end of a line at the beginning of the next one); justify text (using full spaces only); vary margins; and perform other normal text-entry and display functions. Scrolling is slow, and the Metafile text-management module cannot begin to substitute for a regular word-processing program. It permits printer control characters, can be made to prepare nicely formatted documents, and has a variety of options for organizing a document at the time it is printed.

Metafile's text management changes from a relatively simple word processor into a first-rate forms processor when it is combined with the database-management functions. The editor makes it easy to construct complicated documents that draw on the database facilities to fill in appropriate blanks. For example, you can create a form for billings and then combine the form with information from the database to prepare customized form letters. The letters can not only contain any information derived from files in the database but also can make use of any calculations, combinations, or transformations possible with the database functions. The result is a powerful and flexible text-and-data-processing system, with capabilities far beyond a so-called mail-merge program.

Several peculiarities of the Metafile system may reduce its usefulness under some conditions. The program uses a hardware-protection lock, which is a device that plugs into one of the comput-

er's serial ports. Without this lock, you can not use Metafile to store more than 25 records. This ensures that if a copy is made and used without the lock, it will not function properly. The program often checks to see if the lock is installed while you are using the program. This plan permits you to copy the disk for a backup, use a hard disk, or transfer the Metafile system to another computer.

Probably because of the lock, Metafile cannot use a serial printer, though the manual doesn't say so. A Sensor-based Systems technician confirmed that there is no way to attach a serial printer to this system. If you do have such a printer, you must have it turned off while the Metafile system is operating or the lock transmits a character each time it is checked. In fact, Metafile can only deal with parallel

printers from Epson, NEC and Data Products. This is a serious limitation, as an office may depend on serial letter-quality printers.

Another limitation of the system is the absence of a "run-time" module, the small part of the entire system necessary to operate a completed application. If you develop an application and want to have it used throughout your organization, each workstation using the application must have the complete Metafile system, even if it has no need for most of the programming features. Metafile should make the kernel of its language available in a run-time version that allows applications to be run but not developed.

The Metafile system occupies an entire floppy disk. With a two-disk machine, the size of a data file is limited to what can fit on the second floppy, and some file manipulations may be limited by the small space available on a single floppy. It is best to use Metafile with a hard-disk system, where system files and data files can reside with room to spare.

Finally, there are the manuals. Two of them provide a helpful introduction and tutorial focused on text management, data management, and procedure preparation. A third manual serves as a reference. The latter is clear and well organized, but critical details are missing in various places. The reference manual is evidently for version 6.0 since it includes an update sheet for added features of version 7.0. The manual itself gives no indication of the version to which it refers. This manual has practically no useful information about the printer requirements and limitations of the Metafile system.

Metafile is a powerful and flexible database system with text management suited for hard-disk IBM PC systems equipped with parallel printers.

OMNITERM 2

A communications package from Lindbergh Systems

BY MARC STERN
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Once in a while, we run across a program that shows a great deal of promise, but has some shortcomings that turn an otherwise excellent piece of software into a merely good one. Omniterm 2 from Lindbergh Systems of Worcester, Massachusetts, is such a program.

It is a powerful, flexible communica-

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tions package that gives you complete control over an intelligent modem. It will allow you to use the very popular XModem file-transfer scheme for error-free communication. It can let your personal computer function as one of a number of types of computer terminals (Teletype, DEC VT52 and DEC VT100 and others). These features alone would normally move a communications program well along toward the excellent category, but in this case, the execution of these features leaves something to be desired.

For example, although starting Omniterm 2 on your IBM Personal Computer or PC-compatible machine is fairly straight-