

screen, the program displays a message explaining the pause. Like other Microsoft programs, this attention to detail makes the Project more pleasurable to use.

Microsoft Project shares data and files with other programs easily. The program writes many popular microcomputer file formats. Data Interchange Format (DIF) files, Base II and III (Sybolic Data Format) files, Multiplan, Microsoft Chart, and Lotus' 1-2-3 files can be written.

For smaller projects, where tracking, scheduling, and costing are the primary concerns (rather than interdependencies and planning), then Project does a very good job. If the project management market had remained similar to 1984's, we'd have no trouble rating Project's performance as excellent: It would be an industry leader. But the market has expanded in the last two years, and other improved products have been released. When compared to broader, more muscular programs like Timeline and Superproject Plus, Microsoft Project, Version 2.01 is missing some power features and just doesn't handle big, complex, multipart projects as well (although its project-link facility has improved). Viewed against the very good scores earned by these competitors, Microsoft Project 2.0 earns a satisfactory in performance.

DOCUMENTATION: The documentation for Project is very good. The user manual has been substantially revised and lengthened and the structure improved. It consists of many well-written, informative sections, including a program-use section, an extensive program reference, five appendices, and a lexicon of project management terms.

In addition, a complete index and table of contents are included. The written

documentation also comes with two different reference cards that summarize Project's use, features, and keyboard commands. The manual contains many examples of program usage. The manual illustrations are also helpful. Microsoft supplies the entire system in the familiar Microsoft Easybox clear plastic storage box, which we find particularly handy as a container.

Despite the high quality of the manual, Microsoft Project does not sirup with its on-line documentation. Each of the menus has a dedicated help command assigned to it which provides further information on any detail you desire.

The documentation effort is a big plus for the program, making it easier to learn than would otherwise be the case. We rate documentation very good.

EASE OF LEARNING: We didn't have any problems learning Version 2.01, despite a lengthy hiatus from the original release. Testing the program on two project-management colleagues, we found that they picked it up very quickly as well, despite their lack of experience with Microsoft programs.

The documentation and the Learning Microsoft Project disk (an on-line tutorial) are the main reasons that learning is so straightforward, and that the product earns a very good in ease of learning despite the infamous Microsoft "bottom-menu" selection scheme.

EASE OF USE: Using Microsoft Project is acceptably easy, but not necessarily intuitive. The menu system we've complained about with other Microsoft programs is not the real culprit. The real problem is the structure of the program.

It's easier to plan, create, and schedule projects from the point of view of the tasks involved and their interdependencies (i.e., task A comes before task B, comes before task C) than it is to list tasks and decide their successors and predecessors. In the first case, you are graphically linking project tasks in a PERT chart; in the second you are filling out a task summary for a Gantt chart. When you're thinking about projects, the graphic support of the PERT chart makes it easier to gauge interdependencies.

That's the method of project creation chosen by Superproject Plus. Microsoft Project uses the Gantt task-summary method for project creation, without graphic support for task interrelationships. Oh sure, you can show a PERT chart that describes the project's tasks, relationships, where they sit in relation to the critical path, and all of that, but these aids aren't available while you are creating the project. That makes Microsoft Project harder to use and less supportive of the planning and creation process than Superproject Plus.

This is just one example of Project's more cumbersome approach to project management. Overall, the program rates as satisfactory in this important category where its competitors have earned higher scores.

ERROR HANDLING: Microsoft Project is well-protected against user foul-ups. It does not allow illegal commands to ruin a project file or disrupt a session. The menu-command lines make it difficult to make a mistake, prompting you, for example, to save data before allowing you to quit the program.

The program makes it easy to save data and difficult to lose it, and it earns a very good error-handling rating.

SUPPORT: Microsoft Project installs on your computer easily, using a supplied installation/setup disk. The program is not copy-protected and you are encouraged to make sufficient backups.

The program disks are guaranteed for 90 days against defects in the magnetic media. Microsoft will provide program replacement disks free during the warranty

period if the disks are defective. Replacement disks can be purchased after the warranty period provided that you sent in the program registration card. Since the program is not copy-protected, you should have sufficient backups stored away and never have to buy a replacement disk.

Microsoft's telephone customer-support system has long been one of the best in the business, and our experience with Project was no exception. The customer-support specialists we spoke with were competent and well-informed and answered all of our questions, including some tricky computer-compatibility questions. We would like to see a toll-free number, however, and support hours longer than those offered (normal business hours, Pacific Time). Still, it rates a very good score.

VALUE: Microsoft Project, Version 2.01 is an updated version of a well-established project management program. A number of new features and capabilities have been added; the program now handles

PERT charts, and actual vs. planning schedules.

But its forte is still project scheduling and costing, not task interdependencies and project planning. Microsoft Project, Version 2.0 has fewer features, fewer capabilities, less flexibility, and less raw project-management horsepower than Timeline or Superproject Plus. A professional project manager who deals with a number of complex projects each day will find it underpowered.

Microsoft has raised the price with its new version, to \$395. Its more powerful competitors are mostly priced at \$495. For its price, Project does offer a nice blend of features appropriate to the large audience of managers who primarily need a project-scheduler and costing program. For this audience, we think it's a satisfactory value.

Don Crabb is the director of undergraduate computer science instruction and teaches at a major Midwestern university.

The Able-1 Integrated Program Has Problems

By John Lombardi
Review Board

Sooner or later, someone will make an integrated package that provides seamless integration between full-function spreadsheet, database, word processing, and communications programs.

Framework and Symphony do a reasonable job but with some limitations. Able-1, the integrated program reviewed here, offers snazzy screens, a consistent set of commands, and easy document transfer between modules, but it also has problems. First, the individual word processing, database, spreadsheet, and communications modules aren't as good as their equivalent stand-alone counterparts. And there are some serious flaws.

FEATURES: Able-1 offers an integrated environment for word processing, spreadsheet calculations, telecommunications, and database management. Within Able-1, users can easily switch from one task to another, while Able-1 takes care of the housekeeping involved in switching applications.

Able-1 also lets you easily transfer files (except graph files) from one task to another. For example, you can include a spreadsheet in a word processing document, and you can send a list of numbers you entered in a word processing document to a database file. This kind of data transferability is a major accomplishment, and although many other programs will let you convert data from one format to another, their methods are more tedious and complex.

Although integration is useful, the ultimate value of an integrated package depends on the quality of its individual modules. And this is where Able-1 falls short. For example, Able-1's word processing module, although offering a reasonable list of features, does not have the rich options associated with full-feature programs such as Wordperfect or even the venerable Wordstar 3.3.

Able-1's word processor does do the normal editing, revising, and formatting. It has find-and-replace functions, allows for changes in margins and page lengths, does headers and footers, and can handle six

print enhancements (bold, underline, superscript, subscript, and any two others defined by the user).

There are facilities to produce mailing labels and to handle mail-merge functions using data from the database program. The Able-1 word processor can produce standard ASCII files, and it also has a dictionary.

The spreadsheet module continues in the same vein. Although not as complex, rich, or powerful as Lotus' 1-2-3 or Multiplan, Able-1's spreadsheet module will meet the needs of most business applications.

Moreover, like Multiplan, the Able-1

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REPORT CARD

PERFORMANCE SOFTWARE
MICROSOFT PROJECT
VERSION 2.01

		Unacceptable	Poor	Satisfactory	Very Good	Excellent
5.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of Learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Error Handling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Value	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUMMARY

Microsoft Project, Version 2.01 is an updated version of a well-established project management program. A number of new features and capabilities have been added (for example, it now handles PERT as well as Gantt charts), but it still has fewer features than its slightly more expensive competitors. Project excels at project scheduling and costing, rather than at task interdependencies and project planning. Not copy-protected.

PRODUCT SPECS

List Price: \$395. Version tested (2.01) available for IBM PC, PC XT, PC AT, and compatibles using PC- or MS-DOS 2.0 or later. Requires 256K of RAM, two floppy disk drives, monochrome or color display, printer. Microsoft Corp., 16011 N.E. 36th, Box 97017, Redmond, WA 98073; (206) 882-9080.

InfoWorld

REPORT CARD

PERFORMANCE SOFTWARE
ABLE-1

		Unacceptable	Poor	Satisfactory	Very Good	Excellent
2.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of Learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Error Handling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Value	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUMMARY

Able-1 is an inexpensive integrated package with a consistent user interface and good capability for transferring data among its modules. It has a capable database, competent spreadsheet, and modest communications module that may make it useful for specialized applications. But the terribly slow word-processing module and inadequate error handling seriously limit Able-1 as a general-purpose integrated package. Not copy-protected.

PRODUCT SPECS

List price: \$44.95. Version tested (3.0) available for IBM PC or compatibles. Requires 512K of RAM, two floppy disk drives (hard disk recommended), MS- or PC-DOS 2.0 or later. Able International Inc., 301 N. Main St., Pueblo, CO 81003; (303) 534-2600, (800) 826-1907 or (800) 826-4784 in Colorado.

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Cresta
Xtmode
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limited
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Reviews/Software

spreadsheet can have links that attach it to other spreadsheets, offering the possibility of many smaller-spreadsheets that pass information through the links. Cells can be protected, formatted, moved, and copied. Columns and rows can be added or deleted. And you can construct pie, line, or bar graphs from spreadsheet data. Able-1 also supports a sort function.

Able-1's communications program is adequate for casual work, especially with public information utilities such as CompuServe, for which it offers Xon/Xoff, CTS/RTS, and None error-checking protocols. But it lacks many capabilities found in some user-supported programs available from public bulletin boards or in any of the full-feature commercial programs such as Crosstalk. For example, it lacks support for Xmodem or Kermit protocols. It has no form of terminal emulation and lacks provisions for stripping or filtering incoming or outgoing characters. There is, however, a provision for maintaining a telephone connection in the background while working on another module in the foreground.

Still, it does send and receive files, permit auto-dial and answer, let you change and modify parameters, and can use macros for automatic dialing of remote-location services.

The database module is the best developed of the Able-1 modules, falling somewhere between a flat file manager such as PC-File and a full-fledged database management system such as Dbase III.

You can create databases apparently limited in size only by disk space. You can also create linked databases in which multiple files are connected through a common field. Although not as powerful as a fully relational database manager, Able-1's database does have an impressive array of features.

PERFORMANCE: Although some of Able-1's modules are reasonably comprehensive, several peculiarities of Able-1's operation gave us reservations about the package as a whole.

The word processing module is by far the worst performer in the group. Its response is so slow and clumsy that we can recommend it for only the shortest memos. Even modestly speedy typists will easily type ahead of the screen, and in some situations it is quite possible to type not only ahead of the screen but beyond the limits of the internal buffer. This generates warning beeps as characters are lost. You wait for the screen to catch up, see which characters got lost, make the correction, and try to type more slowly.

Although the module has a dictionary, it is of the flag-and-then-correct variety. It found the following words as misspelled: screen, stuff, black, text, buffer, up, mode.

The dictionary is surely one of the worst performers we have seen in a long time. The performance of the word processor must be judged unacceptable.

The spreadsheet works much better, although its calculating speed is slower than that of Lotus' 1-2-3 or even older versions of Multiplan. Nonetheless, the good complement of functions and the reasonable speed of operation make the spreadsheet a fair performer. Although the graph function is useful, it is not as comprehensive as Lotus 1-2-3's modest graphics.

The communications program performs within its limits perfectly well. It dials, connects, makes the transfer and receipt of data, and logs off. However, the absence of terminal emulation and the failure to include any of the standard error-checking protocols greatly reduce this module's usefulness. Because of these limitations, and because much more competent programs are available quite cheaply, we rate the communications program as a fair performer.

Measured against a program such as PC-File, which has roughly the same functionality, the Able-1 database performs well. Its pluses include its capability to link files, its quick retrieval of items, its flexible screen formatting, and its capability to interact with the word processing program or spreadsheet. There is no programming language, although you could construct complex processing macros. This module is a good performer.

The Able-1 modules are a mixed bag — some being reasonably effective, others modest, and the word processing unacceptable — making it difficult to rate the performance of the whole system. Balancing the strengths and weaknesses of the different modules, we rate Able-1's overall performance as poor.

DOCUMENTATION: Able-1's documentation, which consists of a single 281-page paperback book, reflects the unevenness of the package. For the most part, the explanations are clear, the examples helpful, and the index reasonably complete. Unfortunately, the book's binding makes it nearly impossible for it to lie flat. As a result, we had a difficult time keeping the manual open.

The manual is thin on technical details. We couldn't find much information about the limits of the various programs. For instance, we wonder how many records the database can hold, what the maximum size of a record or spreadsheet is, and how large a document the word processor can accommodate. We found it impossible to locate the answers to these questions in the documentation.

Also, much information is scattered in different sections. Although each module

uses similar menus, information about the operation of these menus appeared in two or three places in the manual.

Finally, the manual describes at least one function that does not exist in the version of Able-1 that we received: The database has a feature that allows you to modify the template for an existing database. This would, according to the manual, allow you to change the size of a field or its type. Unfortunately, when we tried to invoke this rather useful function, we received the following message: "This feature will be available in the near future."

The difficulty of using the manual, the absence of technical details, and the misleading description of functions not available cause us to rate the documentation as poor.

EASE OF LEARNING: Able-1's modules use a standard set of menus and function keys that look the same and work much the same in each module. Thus, a

user can deal with Able-1's word processing and database management modules using much the same command and menu system, making it easier to learn the different modules.

With the uniform menu system and well-thought-out screen designs, Able-1 is quite easy to learn. The manual and the interactive on-line tutorial provide some sample lessons that do a good job of illustrating the features and the integration, making it easy for novices to learn the system.

However, the on-line help is not very beneficial. The help key provides a quick description of what each function does (or how to use it) and then refers the user to the correct page in the manual. However, because using the manual is cumbersome, this solution to on-line help is not very useful.

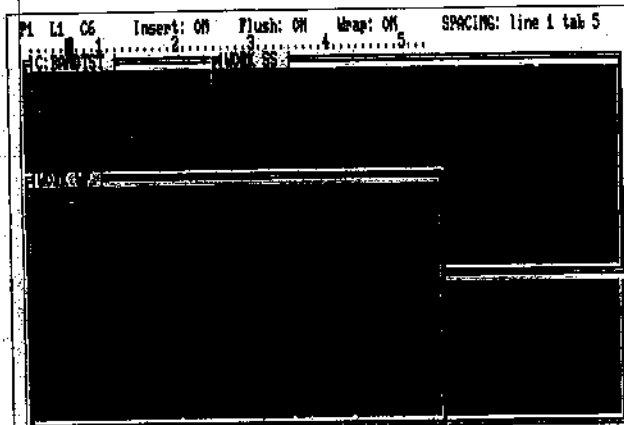
Able-1 permits you to design special help screens that you can call from the

Yes, yes, no, and yes.

Providing
Answers
to your
questions in the
field.
If you've got any other
printer (including how to
1 800 RCA-0094, in Pa., call
Or write: RCA New Products
Division, Data Communications
Products, New Holland Avenue, Box
3140, Lancaster, PA 17604-3140.
For the dot matrix printer
with all the right answers.

RCA

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Apple is a registered trademark of Apple Computer, Inc.



The worst performer among Able-1's modules is its word processor. The response is so slow and clumsy that we can recommend it for only the shortest memos.

menu. But a user who knows enough to design a help screen doesn't need one. This feature is more useful in environments where there will be many naive users and a microcomputer manager can prepare special-purpose help screens to help speed learning.

Even though the on-line help is less effective than that found in competing products, we rate the ease of learning as satisfactory, because of the coherent menu system and well-designed windows.

EASE OF USE: Once you have learned Able-1, it is very easy to use in its basic operations. Things work more or less as predicted, and the consistency of the user interaction with the system makes switching among the modules quite painless.

Unfortunately, a few elements in this system inhibit its effectiveness. One is the inability to use subdirectories from within the Able-1 system; you can change drives, but not subdirectories. To change subdirectories, you must exit Able-1 and go to DOS. Worse, you must leave Able-1 completely to use the operating system, and then reload the system to start.

This is a program that accesses the disk constantly, and it really requires a hard disk; yet there are no facilities within the program to handle the subdirectories needed to organize hard disk files. Unless your system is dedicated only to Able-1 and unless you have a hard disk, Able-1 will be difficult to use effectively.

In addition, the program provides a facility to set the colors used on-screen and with the menus. Unfortunately, the selection doesn't affect the status window that shows the status of a significant number of features, including the number of windows available. On our monitor (Zenith composite green screen), the status window was illegible and couldn't be changed.

The overlapping windows, one of which is active at a time, work nicely. You can move or size these at will. However, moving between windows is less than instantaneous since Able-1 must save the active window and associated information before opening a new window. Thus movement between windows is a bit clumsy and sluggish.

Balancing the good user interface against the sluggish windows, the difficulties with the screen display, and an inadequate set of utility tools, we rate the ease of use as poor.

ERROR HANDLING: Able-1 is tolerant of some user errors; however, when a user does something wrong, the system often does not issue a message. It just copes in ways that are confusing. For example, in specifying a file name, we used the wrong form. Able-1 saved the file O.K., but it put the extension we had specified into the file name and appended no extension of its own. When we went to use the file again, it was not in the form we had expected.

Further, it is possible to send the program into never-never land. In the spreadsheet, we specified a replicate operation incorrectly. The spreadsheet, in attempting to execute our command, evidently got into some kind of repetitive process and blinked and beeped along for a half an hour; ignoring all efforts to interrupt the process before it gave up and reset the machine.

However, because Able-1 keeps practically everything on disk, and only the current record of a database, for example, in memory, power failures and the like cause only minimal damage. The program protects a user against erasing and saves all deletions made during a session. Thus, before exiting Able-1, you could restore every deletion made.

Unfortunately, there is a fatal inability to recover from disk errors such as specifying a drive without a disk or with an

open door. Such an error simply dumps the user into the operating system with no warning and no recovery possible other than restarting the program.

Although such errors do only minimal damage to the system, they will lose word processing material entered since the last save. This is unacceptable error recovery in an era when programs exist that are capable of recovering from such common conditions without any difficulty.

Another fatal error occurs if you type Control-C while opening a new window and loading a file. Normally this character interrupts and cancels a process; however, in Able-1 it canceled Able-1 and dumped us into the IBM PC operating system right in the middle of a work session with all files open.

Because of these deficiencies we have to rate the Able-1 error handling as unacceptable.

SUPPORT: Able-1 is not copy-protected. Like most programs, the Able-1 program comes with an "as-is" warranty by which the company assumes no responsibility for the program's functionality or suitability and does not guarantee that it does what the documentation says it will do.

This is offset, however, by a somewhat contradictory but infinitely preferable 60-day refund policy offered if the program doesn't perform as advertised, or if it turns out to be incompatible with your MS-DOS computer. This enlightened policy allows the curious to try out the program without penalty to see if it suits their needs.

Customer support consists of a three-part set of instructions. First, read the manual. Second, consult your dealer. Third, call the Able-1 hot line (not toll free, but available 24 hours a day). If you have mailed in the warranty card and are a registered user, you can get free phone support for 30 days after receiving the program.

However, if you want to continue to have access to the Able-1 hot line you must subscribe for \$95 a year. This subscription entitles you to unlimited hot-line access plus all updates of the program issued during the year.

We called the Able-1 hot line in Pueblo, Colorado, before our warranty registration card had an opportunity to arrive. The company not only talked to us without our warranty card in hand, but provided helpful information. We asked about the inability to use subdirectories (that's correct, use the operating system), the illegible status screen (it's in red and can't be changed), and the compatibility of Able-1's CRC error-checking protocol with Xmodem (the company didn't know).

Because of the money-back guarantee and 24-hour telephone support, we rate Able-1's support as very good.

VALUE: At \$85, this program is probably a good value under a special set of conditions. If you have an application that is database-intensive, that has some need for short documents using data in the database, and that has a need for simple telecommunications and the integration of telecommunications documents into a database, then this program might do the trick. Although the program is relatively inexpensive, the deficiencies in its word processing module and its poor error handling compromise the general value of the integration.

We can recommend this package only for very specialized uses where the limitations can be shown to be unrelated to the narrow range of functions needed. As a general-purpose integrated package, however, we have to rate Able-1 as a poor value.

John Lombardi is a professor of history and author of five books. He has been working with computers since 1967.

Reportworks Customizes Appleworks For Reports

By Cynthia E. Field
Review Board

Reportworks adds some spice to the hearty but bland Appleworks integrated word processing, spreadsheet, and database program. Those in small business who have an appetite for advanced report generation should find this Appleworks enhancement program from Megabaus Corp. to be versatile and capable.

FEATURES: Reportworks reads data from Appleworks database and spreadsheet files. Enriched with dozens of features, the program formats, computes, sorts, and searches through this information to create customized reports complete with title and summary pages. Besides getting formal reports, you can design and generate business forms such as invoices and purchase orders as well as mailing labels.

Megabaus' program looks and acts like Appleworks. Reportworks features the familiar Appleworks stacking index card menu system. You can keep as many as eight reports available at any one time on the Reportworks desktop.

If your Apple II system is equipped with only one 5¼-inch drive, Reportworks offers the same level of inconvenience as Appleworks, forcing you to keep switching disks. A second drive frees you from aggravating disk swaps. Reportworks can be installed on mass storage media using ProDOS peripherals such as Apple's Profile hard disk drive and the Unidisk 3.5 microdisk drive.

Reportworks is compatible with internal memory-expansion devices such as the Ramworks card from Applied Engineering and the Apple II Memory Expansion Card from Apple Computer Inc.

PERFORMANCE: Reportworks is a flexible program. Once you visualize or rough out on paper the type of report or form you would like to create, you use the page-layout screen to define characteristics such as the size of headers, footers, and work and entry areas. Returning to the report-design screen, you type in labels and use the Apple keys and cursor keys to draw dummy fields.

After you have plotted the fields you want where you want them, you define the characteristics of each field. A drop-down menu lists modifiable features such as field name, type (text, number, date, time, any), format (justification, number, date, time), and data source (keyboard, formula, or file).

By helping you put information where you want it, the program makes it easy to design forms. But where Reportworks really shines is in its data-handling capabilities. Reportworks' built-in functions are similar to those you would expect in a medium-powered Apple II spreadsheet program. Mathematical functions to perform rounding, summing, counting, averaging, and sorting are included, as are date, time, and logical functions.

Many Appleworks users would be satisfied if Reportworks performed its formatting and computing tricks on data from a single Appleworks file, but it does even more. The program can search through as many as nine files for report information. One file serves as the master file, which drives Reportworks to search through look-up files for additional pertinent data.

To fine-tune your reports, you can elicit

specific information by defining up to 10 view criteria using field names and built-in mathematical, logical, and Boolean operators. Reportworks offers text linking whereby you can "add" text entries that appear in separate file categories such as first name and last name. Using definitions in your view criteria library, you can quickly extract, for example, only those customers in Massachusetts whose accounts are 30 days past due.

Reportworks lets you sort in ascending or descending order on any field in the body of your report. For added versatility, up to three levels of sorting are allowed.

After helping you design and tailor the contents of your report, the program constructs the report itself by performing file lookups and calculations. The reports we created averaged three pages and took only about a minute each to build. Once the reports are displayed on the monitor, you edit them by returning to the view criteria or the report design screens. We created both formal and informal reports and invoked a variety of Reportworks functions. We encountered no sorting, calculating, or formatting errors. We "printed" one report to the Appleworks word processor, where we dressed up the report with boldfacing and underlining and added a cover letter.

Like Appleworks, Reportworks is compatible with Quark's Catalyst 3.0 program selector. On one 3½-inch disk, we installed the Catalyst Desktop, Appleworks, Reportworks, and the Macintosh-like file utility program, Mouse File.

The reports generated by Reportworks go well beyond Appleworks' limited formatting and mathematical capabilities. Because of its versatility and plentiful data-handling capabilities, we rate Reportworks' perfor-

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REPORT CARD

PERFORMANCE SOFTWARE
REPORTWORKS

6.2

	Unacceptable	Poor	Satisfactory	Very Good	Excellent
Performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of Learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Error Handling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Value	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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