REVIEWS

WordPerfect, Word battle; users win

Microsoft Word for Windows 2.0 defines the state of the art in Windows word processing; WordPerfect successfully ports its market-leading DOS product, but adds few new features

BY JOHN LOMBARDI CONTRIBUTING EDITOR

WordPerfect and Microsoft have for years been leaders in the word processing world with their flagship products WordPerfect and Word. Both products have fanatical DOS followings. Will Windows make turncoats of either of those products' users?

Word for Windows, Version 2.0 appears just as WordPerfect brings its best seller, WordPerfect 5.1, to the Windows environment. As the companies introduce new and improved versions for Windows, they can now dual on common Windows ground. Both companies are committed to producing the best word processor, and the battle between the two promises to be exciting. In the long run, users will benefit as these companies add and enhance features and make word processing easier than ever.

Word for Windows, Version 2.0 sets the state of the art. Microsoft has focused on increasing ease of use, especially with everyday word processing tasks. The new version lets you create text easily, although this represents the least of the product's many charms. Word for Windows handles graphics as if it were a graphics program, charts as if it were a charting program, and equations as if it were an equation writer. Word supports Object Linking and Embedding (OLE) for integration with other packages such as Microsoft Excel, Publisher, or Works for Windows, for example. Word for Windows can put your words on paper in color, with shading, borders, pictures, headers, indices, tables of contents, and just about anything you can think of, and often lots of things you hadn't.

WordPerfect 5.1 for Windows is basically a port of the market-leader DOS product. The GUI environment enhances ease of use with pull-down menus and WYSIWYG display and WordPerfect added a fantastic file manager.

Some spoil sports may wonder who needs all these features. The truth is, few users will need all these features, but as a decade of word processing proves, in large user sites, one program for multiple users is easier to support than different programs for everybody. Word processing users have learned that once a feature is developed, and users learn to use it, it becomes a necessity.

We tested these products based on criteria developed for our last product comparison of office/professional word processors (January 7, page 51). In our February 3, 1992 issue, we will publish a comparison of Windows word processors, and we will have a new set of criteria for the products. Some of the scores from these reviews may change in that comparison.

REPORT CARD   **INFO WORLD**

Office/Professional Word Processors

	(InfoWorld weighting)	(Your weighting)	Microsoft Word for Windows Version 2.0	WordPerfect 5.1 for Windows Version 5.1
List Price			$495	$495
Performance				
Basic editing	(80)	( )	Excellent	Excellent
Proofing tools	(80)	( )	Very Good	Very Good
Mail merge	(50)	( )	Very Good	Very Good
Layout	(50)	( )	Excellent	Very Good
Style sheets	(50)	( )	Excellent	Very Good
Font/printing	(50)	( )	Very Good	Excellent
Reference tools	(50)	( )	Excellent	Excellent
Import/export	(50)	( )	Excellent	Excellent
Networking	(50)	( )	Very Good	Very Good
Speed	(50)	( )	Good	Good
Macros	(30)	( )	Excellent	Satisfactory
Documentation	(75)	( )	Satisfactory	Satisfactory
Ease of learning	(75)	( )	Very Good	Very Good
Ease of use	(130)	( )	Excellent	Excellent
Error handling	(40)	( )	Very Good	Excellent
Support				
Support policies	(20)	( )	Very Good	Very Good
Technical support	(20)	( )	Satisfactory	Very Good
Value	(50)	( )	Excellent	Excellent
Final scores			**8.4**	**8.3**

Use your own weightings to calculate your score

GUIDE TO REPORT CARD SCORES

InfoWorld reviews only finished, production versions of products, never beta test versions.

Products receive ratings ranging from unacceptable to excellent in various categories. Products rated within 0.2 points of one another differ little. Weightings represent average relative importance to *InfoWorld* readers involved in purchasing and using that product category.

See Guide to Reviews, December 9, page 106 for a complete explanation of Reviews scoring.

BENCHMARKS   **INFO WORLD**

Office/Professional Word Processors

	Microsoft Word for Windows Version 2.0	WordPerfect 5.1 for Windows Version 5.1	Microsoft Word for Windows[1] Version 1.1	Lotus Ami Pro[2] Version 2.0	WordPerfect for DOS[1] Version 5.1
File operations/simple file					
Open	0:02	0:03	0:02	0:04	<0:01
Save	0:02	0:03	0:02	0:02	<0:01
Export ASCII	0:03	0:13	0:03	0:03	0:03
Import ASCII	0:03	0:12	0:02	0:05	0:05
Import WordPerfect 5.0	0:17	0:03	0:17	0:16	0:01
File operations/complex file					
Open	0:05	0:07	0:03	0:08	0:04
Save	0:04	0:03	0:02	0:02	0:01
Print	12:57	3:13	6:11	6:32	3:05
Search tools/simple file					
Search	0:08	0:05	0:01	0:03	0:01
Global search/replace	0:03	0:07	0:03	0:01	0:02
Search tools/complex file					
Search	0:03	0:05	<0:01	0:01	0:01
Global search/replace	0:03	0:07	0:03	0:02	0:04
Editing tasks/simple file					
Reformat	0:08	0:05	0:06	0:01	0:01
Jump to end	0:02	0:03	<0:01	<0:01	<0:01
Editing tasks/complex file					
Reformat	0:17	0:07	0:04	0:02	0:04
Jump to end	0:03	0:03	<0:01	<0:01	0:01

Times are in minutes:seconds.
[1] Reviewed January 7, page 69.
[2] Reviewed October 14, page 105.

INSIDE REVIEWS

INFOWORLD

Microsoft emphasizes ease of use with Word for Windows update

With Word for Windows 2.0, Microsoft has focused on adding ease-of-use enhancements to those in Version 1.1a. The feature that most users will recognize and enjoy first is the "drag-and-drop" feature for moving text. This feature is a real time-saver, as you no longer need to take the individual steps of cut or copy, and paste when repositioning text. In addition, Microsoft has enhanced the print merge feature with graphical diagrams and step-by-step instruction.

Users upgrading from the previous version of Word will be pleasantly surprised at the little things Microsoft has done to make the product easier to use. Those converting from WordPerfect 5.1 for DOS will have a breeze making the transition because Word for Windows 2.0 will not only accept WordPerfect's keystrokes, but Word will teach you its own keystrokes to get you up to speed quickly. And users new to Windows or Windows word processors should be able to jump right in and start producing documents.

PERFORMANCE:

Basic editing: Word for Windows does all you need as you prepare text. You can cut and paste, and Microsoft has increased the ease of use for column or rectangular area cut and paste. The drag-and-drop feature lets you define a section of your document (text or graphics), point to it with the mouse and, holding the button down, move or copy the selection to another place in your document. This is a feature that word processors should have had since day one, and it greatly simplifies text manipulation. Word for Windows offers multiple newspaper columns that you can create easily using a mouse, but they cannot be of unequal width. You can create up to six columns directly from the customizable toolbar.

Word 2.0 can search and replace with or without maintaining capital letters, and you can undo your last replace. You can time stamp your documents, use redline or strikeouts, and maintain left, right, center, or decimal tabs with leaders. You can justify your paragraphs left, center, and right. Hyphenation takes place automatically or manually, and you can have up to nine documents open, or windows open on different sections of the same document. If you're coming from a WordPerfect background, you can set your options to recognize WordPerfect keystrokes, which could be a dream for WordPerfect users. Word for Windows has a superb set of features, and we rate basic editing excellent.

Proofing tools: Word for Windows' improved spelling checker now checks words you have entered, and it has options to ignore your new word. You can also choose to ignore all occurrences

PRODUCT SUMMARY

Microsoft Word for Windows

VERSION 2.0

Company: Microsoft Corp., 1 Microsoft Way, Redmond, WA 98052-6399; (800) 426-9400, (206) 882-8080.
List Price: $495; upgrades $129.
Requires: IBM AT or higher computer running DOS and Windows 3.0 or later; 5 megabytes of RAM minimum with 15 megabytes of RAM for full system; EGA or better video display; mouse highly recommended.
Pros: Exceptionally full-featured word processing program; especially strong in graphics, charting, and tables with superior capabilities for styles, layout, and templates; supports WordBasic for powerful macro programming; superb mail-merge capabilities and strong forms processing.
Cons: Complex product lacks linked frames and story lines; sorting is weak and frames cannot be used to carry story lines; speller does not automatically check headers and footers.
Summary: Word for Windows 2.0 sets a new standard for word processing power and capability. Its emphasis on graphics, charting, and tables, as well as its capability to manage complex tasks with macros and a fully customizable user interface, indicates the growing maturity of word processing tool kits. Word for Windows 2.0 permits organizations and users to establish the word processing environment and tools most appropriate to their work.

of a word, and there is an option to undo the last word changed. You can start and stop the spelling check anywhere within your document, but you can't recommence after a stop. The program will check header and footer text, but only if you put the cursor in the header or footer before you start, and then it will only check that header or footer. You can, however, check headers and footers in page layout view.

You can buy foreign language dictionaries (there are 14 available at $69.95 each) and specialized word lists for legal and medical terms. The thesaurus offers synonyms, antonyms, and parts of speech. With the foreign language dictionaries you can flag an area of text that is in a different language, for example French, and when the speller checks the document, it will revert to the French dictionary to check spelling so that it doesn't flag correctly spelled foreign words as misspelled English words.

A completely integrated grammar checker completes the word tools, and we found it works quite well. We rate proofing tools very good.

Mail merge: Word for Windows' mail merge does almost everything you can imagine. It has automatic assistance for labels, a wide range of capabilities for form-letter templates, and the capability to produce and manage forms with fill-in boxes and dialogs. All this comes thanks to the elaborate WordBasic language, which offers many useful constructs for programming complex form-letter tasks. However, you do not need to be an expert to operate the form letter or mailing label operation. Indeed, special macros exist for most Avery-brand labels for laser printers. You can use variables, sort and select, and you can use data from many data files, such as Lotus 1-2-3; dBase II, III, and IV; WordPerfect; Excel; and various forms of ASCII.

Date stamping and record skipping, along with automatic deletion of empty fields, make this a superior mail-merge system. However, the system applies the main document formatting to everything

that comes in from a data file. That could cause you a problem if you use mail merge to make bibliographies or other materials with complex formatting in the original data file. If you format your data in the data file with underlining, fonts, or boldface, the mailing label or other document assembly results may surprise you. Word for Windows' fields provide an alternative, but unfortunately this feature is not documented clearly in either the printed or on-line documentation. We rate mail merge very good.

Layout: Word for Windows has so many possibilities for layout control that even veteran word processing experts may become confused. You can control every element of the text; you can have frames, objects, graphics, tables, col-

Word for Windows has so many possibilities for layout control that even veterans may become confused.

umns, rulers, glossaries, and dropcaps, for example. The graphics capabilities of this program can keep you entertained for hours, drawing, charting, sizing dropcaps, constructing lines, rotating images, and otherwise doing whatever a regular drawing package might do. Endless opportunities to create free-form shapes combined with superior graphics import filters for most known graphics types make this program's layout capabilities exceptional. You can move margins and print portrait and landscape orientations on different pages within the same document.

Word for Windows has its own version of a stand-alone formula editor, integrated via Object Linking and Embedding
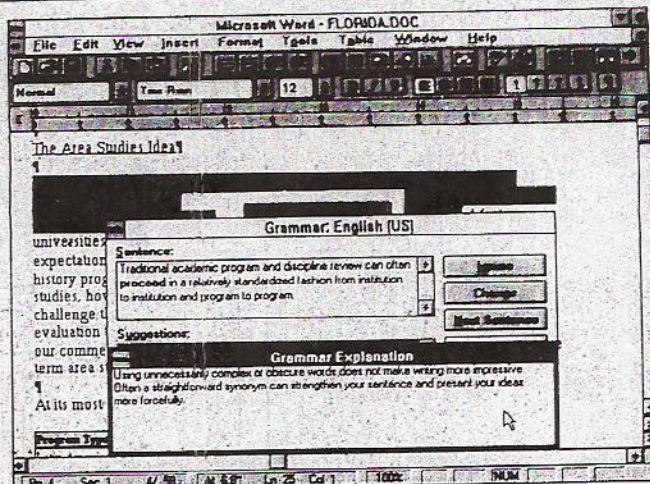
Microsoft's Word for Windows, Version 2.0 contains an integrated grammar checker, which you can customize to enforce or ignore various grammar rules.

(OLE), so you can construct the most elaborate scientific formula imaginable. Word for Windows' frames enclose text, graphics, tables, or other document objects, and you can manipulate the frames for size and position on the page or relative to other layout elements such as margins, paragraphs, or absolute positions. However, frames do not have all of the linking, story line, or other capabilities of Lotus' Ami Pro 2.0 frames. Of course, you can have left-right page layouts, floating headers and footers, different headers and footers on the first and subsequent pages, column balancing, and multiple views with zoom. We rate Word for Windows' layout capabilities excellent.

Style sheets: Style sheets hold named combinations of font, margin, indent, borders, language, and other appearance characteristics of paragraphs. You can have many different styles associated with

one document or named style sheet, and you can apply, modify, copy, or create style sheets and styles with abandon. However, styles sheets cannot be independent of text. Styles can become part of templates, which are model document formats that have layout information, style information, and boilerplate text ready for use and reuse. You can have a customized toolbar for each template, including macros and special links to documents. Changing and managing styles takes little effort; it is so easy to create and change styles that the greatest danger comes from having too many different styles whose meanings you can't remember. Another styles feature is linked styles, where you can link two or more styles together and, when you push the Enter key, you will be switched automatically to the next style. We rate style sheets excellent.

Font/printer support: On PostScript

WordPerfect, Microsoft Word take different paths to the same destination

Ever since the initial releases of the DOS versions of Microsoft Word and WordPerfect, the two products have been dramatically different. Despite the acceptance of Windows, which has made the programs' interfaces and ease of learning very similar, and despite the growth of each product's features set, which has made what they can do almost identical, they remain very different creatures when it comes to formatting text.

WORD'S OBJECTS. In Microsoft Word, each character, paragraph, and section is an object that has formatting associated with it. You format a character, for example, and the character-level formatting (font, size, color, and so on) is attached to it. That doesn't mean you have to format each character individually; you can format groups of characters or paragraphs, and when you insert a new character or a new paragraph in front of an existing one, the new object takes on the attributes of the old one.

This method keeps the formatting consistent and local. When you change a selection of text, your changes only

apply to what is selected. And if you copy, say, a paragraph from one place to another, it will have the same formatting in its new location. Provided, that is, you copy the usually invisible marker that sits at the end of the paragraph. The fact that a paragraph's formatting is encapsulated in the paragraph marker causes novice Word users a lot of grief.

WORDPERFECT GOES LINEAR. WordPerfect, on the other hand, uses a linear formatting model. Instead of attaching format attributes to a selection, you insert a formatting code as a separate entity into your stream of text. You insert codes to turn on use of a particular font at a particular size, or to implement certain tab stops or line spacing. To turn the formatting off, you have to insert another code. In practice this is almost completely automatic: You select a block of text and use the menus to format it a particular way, and WordPerfect for Windows puts the start codes and the beginning of your selection and stop codes at the end.

WordPerfect for Windows' method gives you extremely precise control of where formatting starts and stops. And

because these "Reveal Codes" exist separately from the text, you can see and modify them, take them out, and play with formatting in a manner very different from Word.

In WordPerfect, however, copying formatting from one place to another is a different thing than copying text. You must copy the separate formatting codes to have the formatting follow your text. Fortunately, WordPerfect does this for you automatically, and you can watch if you have the Reveal Codes window turned on. The only real problem with this is that in complexly formatted documents, the Reveal Codes can become confusing, and "debugging" a document's formatting becomes an exercise in Zen-like concentration.

Microsoft Word doesn't give you the same clues about formatting as does WordPerfect, but neither does it create a sea of codes you may need to wade through. In Word, the text and the formatting are bonded together.

YOU SAY TOMATO ... For the most part, WordPerfect for Windows' Reveal Codes act as a concession to the huge number of

existing WordPerfect for DOS users and all their files. Either that or a throwback to an earlier time; it depends on your point of view. Back in the days of non-WYSIWYG word processors, WordPerfect's Reveal Codes helped the experienced WP operator fine-tune text formatting. Today, thanks in large part to Windows, on-screen formatting has almost completely obviated the need to see under the hood of a document.

Even if future versions of WordPerfect for Windows keep the code-based system for formatting documents, I would not be surprised if the capability to display the Reveal Codes eventually vanishes from the application. As Microsoft Word shows, when you can see almost exactly how your text will print by looking at the formatting on-screen, you don't need much else.

Novice users, thank goodness, don't have to be exposed to either Word's or WordPerfect's quirks right away. For most functions, the programs work similarly, which is almost surprising when you consider how different they are at their cores.

— *Raphael Needleman*

printers Word for Windows can do all that the program can show, and Word also supports color printing. You can print at any size, and the program supports Adobe Type Manager and other font-scaling packages, although it doesn't ship with any. Word for Windows will also support the TrueType fonts to be included with Windows 3.1. The capability to print with portrait and landscape orientation in the same document on different pages represents an improvement. Word for Windows supports a host of printers through the Windows interface, although its printer drivers aren't nearly as complete as WordPerfect's. We rate font and printer support very good.

Reference tools: Word for Windows has a complete outlining capability-with collapsing headings, multiple numbering systems, the capability to promote or demote headings, and close integration between formatting styles and outline levels. Comprehensive footnoting puts notes at the bottom of the page, gathered at the end of sections, or at the end of the document. You cannot, however, have footnotes and endnotes in the same document. You can have various numbering styles for footnotes, or only a symbol instead of a number. Index capabilities include regular style or run-in style where subentries follow in the same line, and you can have cross-references.

Speed: This version of Word for Windows is a little slower than Version 1.1, although it still did well in our tests. We did notice, however, an extremely slow printing time for our complex test file. In addition, we found the product sluggish when editing in normal or page layout mode. We rate speed good.

Macros: Word for Windows remains a macro demon. Its WordBasic provides an unusually rich array of programming constructs for developing custom applications. You can perform conditionals, arrays, do-loops, while-when, if-then-else, and a host of other functions. The program comes with many pre-programmed functions covering a variety of common word processing tasks such as creating envelopes via the toolbar or setting up form letters. These serve as useful models for those interested in constructing their own applications. All Word for Windows menu commands can appear in a macro and a macro recorder will copy all of your keystrokes. We rate the macro language excellent.

DOCUMENTATION:

Word for Windows comes with a monster user guide of some 848 pages; separate guides to the Equation Editor, the Graph program, and the Draw program; and a getting-started booklet. In addition, you have almost 2 megabytes in the main

board shortcuts abound; pull-down menus offer additional information; and context-sensitive help works well.

For WordPerfect users, Word for Windows has a complete emulation of the WordPerfect keystroke commands for common editing functions. When clicked on, this feature not only lets you use WordPerfect keystrokes, it gives you a message indicating what the Word for Windows keystroke would have been. This makes the switch from WordPerfect to Word for Windows much easier.

Thus, once installed, the program works quite well for novices who don't try to do anything fancy. However, the clear path disappears rapidly when a new user ventures into graphics, charts, tables, frames, or any other sophisticated effect. We found it easy to get lost in the complexities of this program. We rate ease of learning very good.

EASE OF USE:

After a relatively short period of experimentation, Word for Windows becomes very easy to use. Few users will need to understand all levels of complexity in this product. Once learned, Word for Windows' flexibility and power speed use and make complex tasks effortless.

There are numerous customization options to enhance ease of use: You can customize the toolbar's icons to include those features you use frequently; you can customize the menus, printing options, on-screen views, keyboards, and so forth.

The file management capabilities are impressive. You can see the contents of a file from the file list. Word for Windows lets you search for files by keywords, text strings, title, subject, creation dates, and more. From the file menu, you can open, print, copy, preview, and delete files, for example. We rate ease of use excellent.

ERROR HANDLING:

Word for Windows handles errors with reasonable effectiveness. While its undo only captures the most recent action, and then only until you do something else, it does capture backspaces and deletes. You can have timed backup, and you can set the program to make a backup file before editing. If you take these precautions, you will have little chance of losing files. We did not experience any unrecoverable application errors. We rate error handling very good.

SUPPORT:

Support policies: Microsoft offers a 60-day money-back guarantee and free, but not toll-free, technical support from 6 a.m. to 6 p.m. Pacific time Monday through Friday. It also offers fax and BBS support, in addition to corporate extended policies. We rate support policies very good.

Technical support: Our calls to Microsoft technical support produced basic answers to our technical questions, although on one occasion a technician who promised to call back with more information failed to do so. We rate technical support satisfactory.

VALUE:

Word for Windows lists for the usual $495 price put on most of the professional word processing products. Word for Windows compares favorably to WordPerfect, although both are impressive products. The ease-of-use features in Word for Windows and its WordPerfect interface options set this product ahead of the pack. Word for Windows 2.0 is an excellent value. □

> ## After a relatively short period of experimentation, Word for Windows becomes very easy to use. In truth, few users will need to understand all levels of complexity in this product.

Word for Windows supports many list styles as well for lists of figures or tables, for example. A macro generates a table of contents based on headings defined by the document's styles, or you can create your own headings. Another macro gathers references to make tables of authorities. We rate reference tools excellent.

Import/export: Word for Windows has strong document filters. These include various forms of ASCII transfer (with and without line endings, with or without paragraph formatting, for example), all WordPerfect 4.1, 5.0, and 5.1 character-based formats; DCA/RFT; Microsoft RTF; WordStar to Version 5.5; dBase III and IV; Microsoft Excel; Lotus 1-2-3 spreadsheets; and Microsoft Word Mac files. However, you cannot convert Ami Pro files, although you can get some extra conversions — such as MultiMate — free by sending in a card. We did notice that the translation for Word 5.5 and Word for Windows 1.1 is not faultless — highly advanced formatting can turn out a little off, but it is nothing severe.

Graphics import conversions include Windows metafile (WMF), WordPerfect bit maps (WPG), PC Paintbrush (PCX), TIFF files (TIF), Encapsulated PostScript (EPS), and AutoCAD files (DXF and PLT). You can also have HPGL, CGM, DRW, and BMP files. We rate compatibility excellent.

Networking: Word for Windows will recognize and guide you through a network installation. You can edit an already open file and save it under a different name. User preferences are stored in individual files. Networking is very good.

Word for Windows help file, 1.6 megabytes in the tutorial files, and 3.8 megabytes in various information text files on disk. Fortunately, the on-line documentation is quite strong, although not strong enough for the complex activities that require the examples in the manual along with the explanations. The on-line tutorial works exceptionally well to introduce a complex product.

Unfortunately, all this documentation fails to include the manual that explains the macro language, which won't be available until January 1992. It will, however, be free to registered users. Even items that should be documented, such as the use of variable fields, which are available on the menus and mentioned in the documentation, receive inadequate coverage. Sometimes the manual refers you to the on-line documentation, which fails to have the full information. An example is the Reference field, which can be used with mail merge to transfer formatting from the data document into the main document, a feature unexplained in the information included with the program. As a result, while the documentation we have is useful, the absence of this significant manual for one of the program's most important features and the skimpy explanations of others holds the score to satisfactory.

EASE OF LEARNING:

Microsoft worked hard to help new users adapt to Word for Windows 2.0. The user interface has icons, rulers, ribbons, and other visual cues; the mouse pointer changes when its function changes; key-

WordPerfect for Windows offers a painless upgrade for DOS users

After a year-long wait and much press discussion, WordPerfect Corp. has brought its flagship word processor into the Windows environment. The good news is that WordPerfect 5.1 makes the transition a strong product. All the good stuff from the DOS version remains, and the Windows interface requires minimal adjustment for experienced WordPerfect users.

Because WordPerfect 5.1 has had an extensive complement of features for some time, the Windows incarnation is an impressive product. While WordPerfect did not add many enhancements, the Windows interface contributes to increased ease of use for its already advanced features.

Given the brutal battle of features and capabilities that defines the word processing marketplace, this missed opportunity means that WordPerfect no longer leads the feature and power list, that position having been taken over for the time being by Microsoft with Word for Windows 2.0. Nonetheless, WordPerfect 5.1 for Windows will provide the huge WordPerfect DOS 5.1 user base a natural and virtually effortless upgrade path into the Windows environment. In addition, WordPerfect 5.1 for Windows retains its "Reveal Codes" feature, which no other Windows word processor has. WordPerfect users will love this, while others may find it an archaic option.

PERFORMANCE:

Basic editing: WordPerfect 5.1 for Windows retains its superior basic editing capabilities, enhanced of course by the Windows environment. Users new to Windows can maintain the traditional WordPerfect DOS keyboard for editing functions, although after some experience with the standard Windows conventions in other programs, we think most will migrate to the Windows standard keyboard. WordPerfect 5.1 for Windows includes the cut-and-paste operation, clipboard, and other standard Windows editing facilities. You can mark, cut, paste, or copy rectangular areas of text.

You can edit multiple columns side by side on-screen or edit them in sequence, just as in WordPerfect DOS. Columns may be of different widths, and you can select any kind of justification for paragraphs (left, right, or center). Search and replace can maintain capitalization, find and replace formatting within styles, find items in boxes or graphics and notes, use wild card characters, and find hard page or column breaks. The program supports time and date stamping, and revision marking with redline and strikeout. You can define tabbed columns, although the

PRODUCT SUMMARY

WordPerfect 5.1 for Windows

VERSION 5.1

Company: WordPerfect Corp., 1555 N. Technology Way, Orem, UT 84057; (800) 451-5151, (801) 225-5000.
List Price: $495; upgrades are $99.
Requires: Requires computer running DOS and Windows 3.0 or later; 286 or higher processor; EGA or higher display; mouse highly recommended; at least 2 megabytes of RAM (4 megabytes recommended), and 6 megabytes of disk space.
Pros: Exact translation of WordPerfect 5.1 for DOS; superior printer features with WordPerfect's printer drivers; strong formatting, indexing, and list making; tables of authorities; superior mail merge system with programming constructs for complex document and list processing tasks; superb sorting capability and file manager.
Cons: Lacks column balancing; text can only wrap around three sides of a frame; graphics editing limited; no charting; no grammar checker; no collapsible outlining; does not show headers and footers on-screen.
Summary: WordPerfect 5.1 for Windows provides solid translation of WordPerfect's highly popular DOS-based product for the Windows environment. The program is effective, powerful, and easy to learn and use. Its features set misses a few of the powerful capabilities of Word for Windows in the areas of graphics and charting, for example. For WordPerfect users who want an effortless upgrade to the Windows environment, this is a fine choice.

program has an effective table system. Tabs include the standard left, right, center, and decimal, and you can center a line around any arbitrary position on the line with a special command.

WordPerfect 5.1 for Windows includes options for automatic hyphenation. You can set the hyphenation zone by percentage of word left and right of break point and you can choose a quick but limited internal hyphenation dictionary or a much more extensive external dictionary. You can edit in up to nine windows at a time and edit different portions of the same document in different windows. We rate basic editing excellent.

Proofing tools: The thesaurus handles synonyms, antonyms, and parts of speech, but offers no definitions. The spelling checker remains superior, checking entered words and making solid guesses. You can replace a misspelled word, skip a word once, or skip all occurrences of a word. You can also check marked blocks of text. You can buy foreign language dictionaries (18 are available at $99 each, or $9.95 if you're upgrading from the DOS dictionaries) and the program supports user dictionaries. There is no grammar checker available as in Word for Windows 2.0 or WordStar for Windows. We rate proofing tools very good.
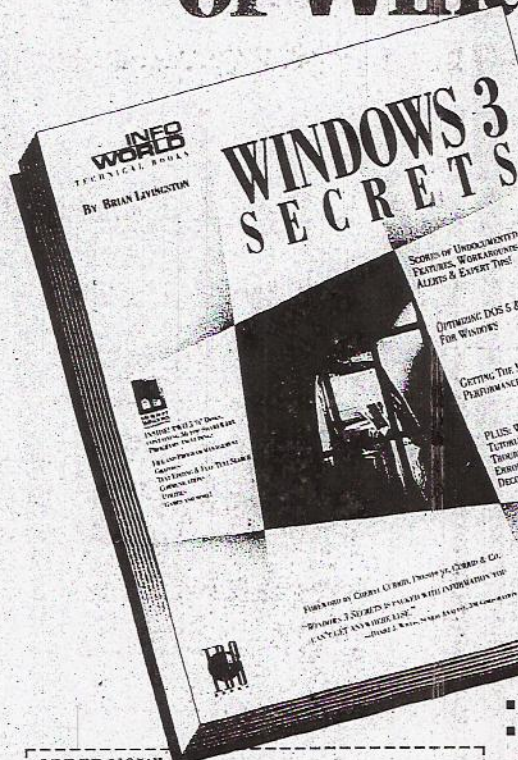
Mail merge: WordPerfect 5.1 for Windows' mail merge offers all the standard elements plus a host of powerful programming commands. You can use the mail-merge system to automate complex form letters and list processing tasks with variables and programming constructs such as If-Then. WordPerfect 5.1 for Windows can also handle labels automatically in many formats. However, WordPerfect does not accept Lotus or database files automatically, although it will convert ASCII-delimited files constructed with practically any delimiter. The WordPerfect sort routine remains the best in the business with features that permit multifield sorts, account for different record and field structures, and handle ascending and descending sequences. We rate mail merge very good.

Layout: You can create separate layout information files or styles that serve as templates for other documents. Page layout capabilities include margins of varying size, indent capabilities, completely customizable tabs, and options for spacing. WordPerfect 5.1 for Windows can use bit-mapped graphics and mirror them, as well as show them in black and white or in outline form. You can rotate, scale, and crop these images, and you can create horizontal and vertical lines. Graphics integration takes place through boxes that can be as large as a page. You can have five different frame series for numbering purposes.

WordPerfect 5.1 for Windows includes a powerful and effective equation

> ## The WordPerfect file manager does an extraordinarily fine job. . . . It far exceeds anything the Windows file manager can do.

editor and a superb table facility. In the tables you can calculate by rows and columns and use relative formulas that adjust when copied into another cell.

You can see multiple views of a document including a draft mode and a preview with zoom. However, WordPerfect 5.1 for Windows will not do column balancing; its process of flowing text around boxes only permits text flow around one side of the frame. The editing screen never shows the entire page with headers or footers, although a separate pane will appear that shows these layout elements. Given the omission of good text flow around frames and column balancing, available in Word for Windows, we rate layout very good.

Style sheets: WordPerfect 5.1 for Windows does not support traditional Windows word processing style sheets; instead, it uses a glossary of document characteristics it calls styles. Each identified style in this library consists of a set of document layout and formatting codes that define the text's appearance and layout, and you can have a large number of these style descriptions. You apply WordPerfect 5.1 for Windows' styles to the character stream and generally affect everything from the point of insertion in the text forward. To change a style, you simply insert another style into the character stream. All formatting and style information exists in codes inserted in the text stream — which is transparent to the end-user (unless, of course, you're working with the Reveal Codes option). Most of these codes start some formatting, which must then be turned off with the insertion of another code, or you can use the paired styles and apply the formatting

that will be automatically turned on or off for each paragraph.

WordPerfect codes appear in a special window opened with the Reveal Codes key. The Reveal Codes window mirrors the cursor placement in the text and allows you to edit, delete, copy, or move codes to create the desired effect. Because codes affect the character stream from the point of insertion forward, the sequence and placement of codes can cause unanticipated effects. Consequently, WordPerfect users all know that complex formatting requires the capability to see codes and manipulate them.

Although it is a reasonably effective system, the design of this product differs greatly from the standard Windows word processor that applies formatting to paragraphs or selections rather than inserting codes in a character stream. (See sidebar, page 88.) Although you can produce the same effects with both systems, the paragraph or selection styles of Word for Windows permit style by example and a better organization of style groups. We rate styles very good.

Font/printer support: WordPerfect 5.1 for Windows supports two printer driver systems. One uses the standard Windows printer drivers for producing word processing documents on printers. The other uses the outstanding WordPerfect 5.1 printer drivers and bypasses the Windows drivers.
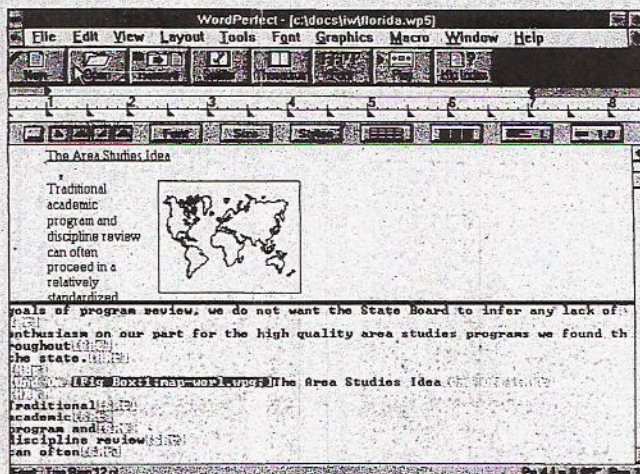
If you use the WordPerfect drivers you can print different-size pages in the same

Import/export: WordPerfect 5.1 for Windows offers numerous import/export formats for text and graphics. You can move files from Ami Pro through Version 1.2b; various forms of ASCII and ANSI text; DCA-RFT; WordPerfect through 5.1; Microsoft Word through 5.5 and Word for Windows through 1.1a (but not Version 2.0, although Word for Windows 2.0 does support WordPerfect 5.1 for Windows conversions); WordStar through 6.0; RTF; XyWrite; OfficeWriter and MultiMate; and DisplayWrite. Conversion of graphics includes such standard formats as PCX, PIC, TIF, EPS, CGM, and MSP. The program has an external graphics converter program that does other files; and the manual explains carefully what it does and does not convert. WordPerfect 5.1 for Windows also includes the stand-alone conversion programs that permit multifile conversions.

You can create Dynamic Data Exchange (DDE) and regular file links, and you can import Excel, Lotus, and PlanPerfect-compatible file formats into tables or the text. Another advantage is complete compatibility with WordPerfect 5.1 for DOS, as both products use the same file format. We rate import/export excellent.

Networking: With WordPerfect 5.1 for Windows, if a file is open, you can either open in read-only mode, or open and edit the file and then save it under a different

WordPerfect 5.1 for Windows maintains the Reveal Codes option from its DOS version, which helps you track and edit complex formatting.

WordPerfect 5.1 for Windows is easy to learn. The transition to Windows will be especially easy for experienced WordPerfect DOS or Windows users.

document and have portrait and landscape orientation on different pages in the same document. The Windows drivers don't permit this. Also, the WordPerfect drivers may be slightly faster.

Unfortunately, though WordPerfect supports almost every printer known, it only includes a subset of what it thinks are the most popular printer drivers in the package.

WordPerfect 5.1 for Windows includes a printer driver editing program and offers a good introduction to basic printer driver modifications. You can order a full technical reference manual from WordPerfect if necessary. The WordPerfect printer driver editing program is the same for WordPerfect 5.1's Windows and DOS versions. We rate font and printer support excellent.

Reference tools: Footnotes and endnotes can coexist in the same document, which is an advantage most other word processing programs do not have. WordPerfect 5.1 for Windows supports index and table of contents generation for a single document and for master documents combined from separate, smaller documents. In addition, WordPerfect lets you manage up to 10 lists of figures or tables; you can also create lists for other elements (such as quotations or text boxes). An elaborate cross-referencing system and an automatic table of authorities facility help construct complex technical and legal text. There are many alternatives for outline indenting and numbering, but you cannot collapse or expand the outlines. We rate reference

name. You can have individual user dictionaries and profiles. We rate networking very good.

Speed: WordPerfect 5.1 for Windows was a bit slower than Word 2.0 in our benchmarks for the complex file. However, WordPerfect's print times were generally quite fast, which may be a result of WordPerfect's printer drivers. Like Word for Windows and Ami Pro, editing is slow. We rate speed good.

Macros: WordPerfect apparently has a very powerful macro facility, but unfortunately the manuals shipped with the product do not describe it. You can order a separate macro manual for $19.95 if you have more than a casual interest in this feature. WordPerfect 5.1 for Windows macros operate differently from and use different commands than WordPerfect DOS macros. Without the manual you can record actions and keystrokes to construct relatively simple macros, but to access the apparent power of the WordPerfect macro facility you will need the manual. There is a conversion utility that reads some macros from the DOS version, but WordPerfect recommends re-creating your macros in the Windows environment. We rate macros satisfactory.

DOCUMENTATION:
WordPerfect's documentation consists of two primary manuals, a workbook, and a reference manual.

The reference manual, organized alphabetically by command name as is the case with previous WordPerfect manuals,

consists of 837 pages of information and examples. Both manuals use good examples, clear writing, and fine cross references. WordPerfect should improve the reference manual with page headings that indicate the topic, as it is difficult to find specific commands without headers.

Unfortunately, WordPerfect does not ship a complete manual set. Macros represent a major feature of state-of-the-art word processing, and the failure to include a macro reference manual is inexcusable, especially without any useful on-disk documentation files for macros. Similarly, the absence of a reference manual for the printer driver editor leaves a user uncertain about the utility of this program, although the reference manual section on printer drivers is better than the section on macros.

The on-line help for WordPerfect is less comprehensive and detailed than Word for Windows. We rate documentation satisfactory.

EASE OF LEARNING:
WordPerfect 5.1 for Windows is easy to learn. The transition to Windows will be especially easy for experienced WordPerfect DOS or Windows users. WordPerfect uses all the standard elements of the Windows interface, including ribbons and button bars, for example. The workbook speeds introduction to the program, the on-line help answers simple questions, and the menus make navigation easy. We rate ease of learning very good.

EASE OF USE:
Experienced users will find WordPerfect 5.1 for Windows very easy to use. It has numerous options for customizing the screen display, the command structure, and the keyboard. You can assign macros to keystrokes, use a standard WordPerfect keyboard, directly access formatting through the Reveal Codes window, work effectively with tables and columns, preview the text with various levels of magnification, and preprogram complex mail-merge tasks.

Like Word for Windows, WordPerfect has a customizable button bar for your most-used features, in addition to an option for short or long menus.

The WordPerfect file manager does an extraordinarily fine job. Run from within WordPerfect or as a stand-alone applica-

tion, the file manager will search by word or file name; select directories or files; drag files from one place to another; move, copy, or delete files; create or delete directories; view files; and launch applications with files. This product far exceeds anything the Windows file manager can do. WordPerfect has translated the File Manager application from its Office collection of programs into the Windows environment and included it with this package. All these facilities enhance ease of use. We rate ease of use excellent.

ERROR HANDLING:
Error handling works well. The program prompts before destructive operations, permits a three-level undelete and an undo that reverses the most recent operation. You can have timed backup and original file backup. Error messages are clear and lead you back to the program without crashing. We received no unrecoverable application errors. We rate error handling excellent.

SUPPORT:
Support policies: WordPerfect offers a 30-day money-back guarantee, in addition to toll-free support Monday through Friday from 7 a.m. to 6 p.m. Mountain time. There is also non-toll-free telephone support 24 hours a day. WordPerfect also offers fax support, BBS support, and corporate extended policies. Support policies are very good.

Technical support: Our calls to technical support produced fine results on a graphics question and a network question. WordPerfect maintains multiple support phone numbers for different problem categories, which we find helpful. WordPerfect's technical support is very good.

VALUE:
At the Windows word processing standard price of $495, WordPerfect 5.1 for Windows is an excellent value. Somewhat less powerful than Word for Windows 2.0, WordPerfect 5.1 for Windows maintains the high level of quality and robust features of its DOS counterpart. □

John Lombardi is president of a major university and author of five books. He has been working with computers since 1967.