Professional Word Processors

Windows illuminates new features but traditional programs stay competitive.

Each time we review the current crop of high-power professional word processing programs, we marvel at the ingenuity and creativity that continues to be invested in these relatively mature products. Despite the simple charter of word processing programs, with every advance in computer technology we see the software advancing as well. Unlike the first versions of WordStar and WordStar, which could run on an IBM PC with 64K of memory and a 360K floppy drive, the latest powerhouse programs like Word for Windows and Legacy, are best served by 386 PCs with many megabytes of RAM and huge hard disks.

This group of programs easily illustrates the state of the art and the direction of word processing development. The programs fall into two main groups.

On one side are programs with roots in the distant past of WordStar or WordStar, character-based programs that translate the model of the typesetter to the computer screen. Although they are enhanced with features and capabilities, these character-based programs remain irrevocably tied to that past.

The best of these, WordPerfect 5.1, remains exceptionally powerful and effective. The worst of these, Multimate 6.0, remains bogged down by its obsolete design. In between these two, the programs range from the high performance of Microsoft Word 5.5, through the solid competence of Microsoft Word 6.0, to the clumsy DisplayWrite with its add-on graphical capabilities.

On the other side are the three graphical user interface programs for Windows 3.0. These have very similar user interfaces, drawing as they do on the underlying model of the Windows operating system and approaching text much more from the typesetting vantage than the typesetter metaphor.

Windows programs let graphics and text interact as объектs with equal claims on the paper's white space, while character-based programs see graphics as intruders. The Windows programs think in proportionally spaced text, they print to later printers naturally, and they work the text and graphics on paper as if for a printed book, not a typed page.

The Windows products range from the powerful and effective Word for Windows to the somewhat limited but wonderfully structured Legacy with its elegant frames for text and graphics elements. In the middle of this pack lies Ami Professional, with graphical controls like Legacy but with better ease of use.

NEW POWER, NEW FEATURES. Among the new features that manufacturers use to provide product differentiation, grammar checkers stand out. Offering self-confidence in the editing or editing success is the quality or readability of their output. These new programs find simple grammatical errors, flag obviously poor word choices, and in some cases offer readability indexes and comparisons with user selected text styles.

Whether this feature will take hold as a major element in top-of-the-line word processors remains to be seen, but InfoWorld readers have indicated on surveys that they value this tool. Multimate is the only program in this review that offers a grammar checker.

Graphics support continues to be an area of considerable competition. Some programs experiment with color printing, and others with elaborate graphics coloring. Many offer table editors with spreadsheet-like facilities included within the programs, and one can translate table data into simple charts. Other programs include hot links to a variety of products, particularly those that support Windows' Dynamic Data Exchange (DDE), a standard that permits data links between data or text in different applications.

The key determinant in the acceptability and spread of high-end features will be the quality and pricing of more advanced hardware. As memory, disk display, and printer prices have come down and capabilities have gone up, word processing software has been built into step with needs and requirements. As new hardware is available, graphical interfaces depend on hardware; hardware is depends on software, and vice versa.

Finally, because the word processing market is so large and because the hardware platforms required for the next word processing are so expensive, we can expect many different word processing products to survive in the marketplace for a long time. Products based on character-oriented DOS — such as Multimate, Total Word, DisplayWrite 5, or Wordstar — will keep large user bases simple because you don't have a lot of new hardware to spend a fortune.

**Products Reviewed**

- Ami Professional Version 1.2.0: Page 54
- DisplayWrite 5: Page 54
- Legacy Version 5.1: Page 54
- Multimate Version 4.0: Page 54
- Word for DOS Version 6.5: Page 54
- Word for Windows Version 1.1: Page 55
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to get the hardware to support these applications. Consequently, the high-end
products will have an ever greater need to import and export many different
document and graph formats. Further, because graphical word processing works
much the same for every program, people will find it easier to switch back and forth
among Windows-based word processors.

This adds to the emphasis on strong import/export procedures to move files
directly from one Windows system to another. This trend is evident in the current
crop of Windows products, all of which have superior import/export facilities.
Beyond Windows, there are two powerful word processors available for OS/2:
WordPerfect, with its superior Word for Windows, WordPerfect and Multimate. The
Windows products have a distinct advantage over the character-based products;
however, Word and Word Perfect are still strong because of the features they offer.
DisplayWrite 5, WordPerfect, and Multimate provide more advanced features than
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Ami Professional Version 1.2B

A

n the high-power graphical word processors, Ami Pro 1.2B offers an extremely effective editing environment. Although Ami does not do outlining and offers no tables of authorities, it offers very strong layout capabilities, similar in some respects to Legacy. For users who need a strong graphical word processing system for general office work, Ami Pro is hard to beat.

Ami performs columnar cut and paste in tables but not in fine-form text. The product has a strong search-and-replace capability, which maintains capitalization. The program also offers red-definable tabs as well as three different tab leader characters. Automatic hyphenation and paragraph justification allow Ami to handle basic editing well. Like Legacy, the program can't open multiple documents — you need to run the program separately for each file. Score: Very Good.

Although DisplayWrite 5 is a standard character-based application, the program supports a mouse. The program's basic editing features include the capability to center and fully justify paragraphs. There is automatic hyphenation and there are definable tabs. DisplayWrite 5's search-and-replace tools maintain capitalization. The program also offers windowing and time-stamping capabilities. Lacking are facilities for generating tab leaders, and columnar cut and paste. Score: Satisfactory.

DisplayWrite 5's user dictionary maintains capitalization on replaced words, and the program will also perform global replace. The program will look up a word that you enter as a correction. There is a thesaurus of synonyms with context-sensitive pop-up definitions. On the other hand, there is no spell checking. Spell checking does not check header and footer text. Score: Good.

A strongly graphical product running under Windows, Ami Pro's layout tools permit multiple columns, margin control, and editing in WYSIWYG with various levels of magnification. The product can use frames, like Legacy, to change formatting on a page. You can even change page orientation (normal and landscape) in the same document. Graphics include free-form drawing and advanced shape creation. Ami Pro will also create a chart (bar or pie, for example) from a table in the text. The program also imports a wide range of graphics formats. Score: Excellent.

Using it's own tools, DisplayWrite 5 supports multiple columns, page preview, line draw, and graphics preview. There is no graphics editor. The program offers only minimal window and orphan control. DisplayWrite 5 Composer, an extraneous add-on to DisplayWrite 5, has a graphics-oriented page layout facility that is reasonably sophisticated, although its editing and document tools are minimal. It is possible to do elaborate layouts with Composer, using files built into DisplayWrite, but the solution is clumsy and requires much patience. One might expect DisplayWrite 5's capabilities upgraded to reflect Composer's capabilities. Score: Poor.

DisplayWrite 5 has a large installed base of IBM users and it fits well into offices that use DisplayWrite technology. DisplayWrite 5 is available with a module called Composer that adds some desktop publishing and layout capabilities. Like Multimate, DisplayWrite offers solid production of office correspondence, mail merge and document assembly. In this comparison we scored DisplayWrite 5 for the most part, but we consider the Composer program as well where it is indispensable for a particular task (such as layout).

Legacy has a fine dictionary that offers parts of speech and definitions, and an exceptionally complete thesaurus. Although it cannot backtrack during a spelling check, Legacy maintains capitalization and can do global replace as well as check, look up, and correct. On the other hand, there are no exception lists, as opposed to user dictionaries — an awkward way to manage the list of words not in the default dictionary. Legacy is Satisfactory.

Multimate has a strong spell checking, checker that checks throughout the document, including headers, footers, and footnotes. It also alerts you to double words and unusual punctuation. The spell checker offers parts of speech and definitions, and the program includes an elaborate grammar checker with multiple readability and style tools. Score: Very Good.

DisplayWrite 5's sophisticated merge facility will handle quite complex document assembly tasks including selection criteria, form letters, address labels, and other documents. DisplayWrite 5 supports conditional and there is an effective method of using data from foreign files and ASCII files. Multimate offers no flat-file manager, but there is a methodology where a data file description can be created as an ASCII file. Score: Good.

Legacy's merge capabilities let you handle routine mailings and labels, but without record selection or prompted user entry. Legacy will step bad records and generate files. However, the program does not have the capability to handle conditionals. There are no special arrangements for use with ASCII files. The problem may merge from ASCII delimited data files as well as its own text format. Score: Satisfactory.

Multimate's merge tools are very strong. The program supports multiple columns and it allows you to control columns balancing in addition to inside and outside margins. There is WYSIWYG page preview and editing as well. Legacy's frame permit construction of complex documents with separate frames, which are really moved throughout the document. Text can flow from one frame to another, unlike in Legacy. Legacy supports graphics preview and editing, and includes line-drawing tools. There is also a table editor. Score: Excellent.

Multimate's layout tools are very strong. The program supports multiple columns and it allows you to control columns balancing in addition to inside and outside margins. There is WYSIWYG page preview and editing as well. Legacy's frame permit construction of complex documents with separate frames, which are really moved throughout the document. Text can flow from one frame to another. Unlike in Legacy, Legacy supports graphics preview and editing, and includes line-drawing tools. There is also a table editor. Score: Excellent.

Multimate's age shows in its layout tools. It has multiple columns. Both enabling and parallel, but its page preview is not primitive and works very efficiently for proportionally spaced text and paragraph output. Although it can import, scale and crop graphics, it does not have styles nor does it come with page layout on-screen for proportionally spaced text. There is simple math, but it only supports decimal tab numbers and cannot cross page boundaries. Only one format line per document, which is similar to a ruler, controls columns, tabs, and justification. The design of format line for proportionally spaced text requires hard calculation of formulas to apply correct column and positioning. Score: Satisfactory.

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INFOWORLD

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JANUARY 7, 1991

Perfomance: Basic Editing

Ami's thesaurus is robust. The product also has user dictionaries and maintains capitalization when replacing misspellings. However, the product cannot back up during spelling checks. Ami will capture double words and unusual punctuation, but it does not check spelling while entering text. There is no grammar checker. Score: Very Good.

DisplayWrite 5 has a large installed base of IBM users and it fits well into offices that use DisplayWrite technology. DisplayWrite 5 is available with a module called Composer that adds some desktop publishing and layout capabilities. Like Multimate, DisplayWrite offers solid production of office correspondence, mail merge and document assembly. In this comparison we score DisplayWrite 5 for the most part, but we consider the Composer program as well where it is indispensable for a particular task (such as layout).

Multimate has far fewer and less effective editing tools than any of the products we review. The product can cut and copy rectangular columns. Search and replace is minimal and does not maintain capitalization in the replaced word. Centering and justification can only be done on an entire document. The only kind of tab leader you can use is the dot character. There are no windowing capabilities and pagination option is very clumsy. Score: Poor.
**Microsoft Word 5.5 offers enhancements to an already-strong character-based product, Word 5.0. Word 5.5 includes drop-down menus, dialog boxes, and buttons. Word 5.0, while included with the 5.5 package, is a separate product. The new system is far better and moves Word 5.5 closer to the operating style of Word for Windows.**

**Word for Windows Version 1.1**

Word for Windows sets the standard among Windows word processors. Effective at most word processing chores, its feature list is rich and its integration into the Windows environment is seamless. Now in a slightly enhanced version, Word for Windows 1.1 remains the product to beat in the Windows environment.

Word's strong editing tools include column cut and paste, table creation, and automatic hyphenation. Its solid search and replace tools include search and replace of formatting as well. The program also offers table makers and user-stamping. There are extensive windowing capabilities, including the capability to edit in multiple windows simultaneously. The program also shows file characteristics such as bold and italic, however, it is not strictly WYSIWYG. Score: Excellent.

**Performance: Basic Editing**

Word for Windows handles column selection, rectangular cut and paste, and complex search and replace. The program also offers hyphenation options, windowing, and time-stamping. You can choose from four different table maker characters. Its basic editing tools handle most any task. Score: Excellent.

Word Perfect cuts and pastes in columns, searches and replaces while maintaining capitalization, and centers and justifies paragraphs and blocks. The program also offers hyphenation automatically. Its search tools are comprehensive and flexible, allowing you to search for simple or limited wildcards, as well as formatting codes. Word Perfect has multiple windows, which are not always easy to use. There are also multiple forms of time-stamping. However, the program only supports dot-tab leaders. Score: Good.

**Performance: Proofing Tools**

Word for Windows' proofing utilities include a strong basic dictionary and user dictionaries. The program's thesaurus also includes parts of speech. The spelling checker alerts the writer to double words and unusual capitalization. It does not backtrack during spell-checking. The downside is that it can't turn off global replace of spell-corrected words, nor does the program automatically check headers or footers. Score: Satisfactory.

WordPerfect's spelling checker and thesaurus are solid and offer parts of speech, global changes, maintained capitalization, and redlining of corrected words. WordPerfect has user dictionaries and can check spelling in headers and footers. However, the program lacks a grammar checker and it cannot backtrack during a spell-checking. Score: Good.

**Performance: Mail Merge**

Word for Windows' mail merge capabilities include user-promoted fields, conditional formatting, and templates for printing letters across a page. It is less effective for producing lists from data files, because those steps are required for each entry. It can also produce Excel data directly into a data document. Word for Windows cannot read any tab-separated information directly; the user just needs to give the field names of the tab-delimited information. There is no flat file manager, but the program saves bad records and can recover fields. Score: Good.

WordPerfect's mail merge handles mass mailings and mailing labels. In addition, WordPerfect includes user-promoted fields, conditional formatting, and templates for printing letters across a page. It is less effective for producing lists from data files, because those steps are required for each entry. It can also produce Excel data directly into a data document. WordPerfect cannot read tab-separated information directly; the user just needs to give the field names of the tab-delimited information. There is no flat file manager, but the program saves bad records and can recover fields. Score: Good.

**Performance: Layout**

Word for Windows' layout capabilities include multiple columns, graphics import and editing, strong text formatting, and superb table facilities. The program also has WYSIWYG page preview and editing, and the capability to preview graphics. In addition, it has scaling and cropping capabilities. WordPerfect has a host of layout tools, including multiple columns and page previews. There are also worded styles and graphics with scaling and cropping. WordPerfect has a table editor, an equation composer, and it can handle multiple margins. It has a widow and orphan control. The program also offers WYSIWYG page layout and the capability to preview graphics, among a host of other facilities. However, the Windows products do offer an easier means to create layout tools. Score: Very Good.

Through Wordstar supports the basic layout requirements of multiple columns, page preview, and text formatting, and some graphics tools, there is a limitation in the WYSIWYG mode. Wordstar also has 14 math functions. Inset, an included program, can capture graphic images from other programs. Score: Satisfactory.
Ami Professional lets you set your preferences to choose which icons will appear in the icon bar at the left of your document.

Displaywrite 5 offers extensive on-line help, for example, to describe its subtyping mode.

Ami handles style sheets gracefully. The program supports automatic style sheets, and it also lets you have named styles as well as styles based on other styles. You can transfer styles from one document to another, or they can be stored independently from a document. Ami has the capability to record styles by example, and you can make changes to the style preview before they are committed. You can also have a "global" style sheet. Score: Excellent.

Displaywrite 5 does not support style sheets independently from the Composer program. Score: N/A.

Legacy supports automatic style sheets for the creation of indices and tables of contents. You can create a library of styles for each document that can contain up to 500 styles. Styles can also be recorded by example. You can transfer libraries from one document to another, and Legacy also offers style preview. Score: Very Good.

Performance: Font/Printer Support

Font support is basic. The program handles a variety of fonts from many manufacturers, including IBM and HP Laser printers. The program can select scalable Postscript fonts. There are no kerning or tracking facilities in Displaywrite, but Composer does offer kerning and several levels of tracking. Score: Satisfactory.

Legacy supports all HP and scalable Postscript fonts. Legacy can also handle bold, underline, and superscript or subscript. The program supports kerning and tracking. Score: Excellent.

We found font and printer support to be fine for fixed pitch fonts. However, Multimate does not handle graphics and Postscript well; in order to resize fonts you must change the pitch setting. The program has a module that handles these fonts and printers, but this module is outside the normal editing and formatting system of the word processor. We found this to be slow and temperamental. Score: Poor.
Word 5.5, while not completely WYSIWYG, does allow you to see some formatting on screen, such as bold and italics.

Word for Windows has an extensive thesaurus that offers parts of speech, in addition to definitions of a selected word.

Word 5.5 style sheets are the most sophisticated of the character-based programs. You can have named styles and record styles by example. Word 5.5 style sheets are independent from each document. You can also have one style sheet to which you can attach multiple documents, similar to Ami. Word also offers automatic style sheets for tables of contents and indexes, for example.

Word for Windows provides automatic style sheets that you can use to generate footnotes or table of contents entries. For example, Word for Windows supports named styles, and you can also have styles based on other styles. Style sheets are attached to each document.

Word Perfect allows you to have named styles, although they cannot be attached to a document. Word Perfect lets you record by example in an awkward way by copying block codes to your stylist document. However, some generation codes cannot be copied in this manner. Word Perfect offers some library styles with the program, but there are no true automatic style sheets.

Wordstar doesn't support style sheets, although you can keep a style library that you can access from any document. You can also record styles by example. There are no automatic style sheets included with Wordstar.

For DOS

Word for DOS

Word for Windows

Word Perfect

Wordstar

PERFORMANCE: STYLE SHEETS

Word for Windows provides automatic style sheets that you can use to generate footnotes or table of contents entries, for example. Word for Windows supports named styles, and you can also have styles based on other styles. Style sheets are attached to each document.

Score: Very Good.

Word Perfect allows you to have named styles, although these cannot be attached to a document. Word Perfect lets you record by example in an awkward way by copying block codes to your stylist document. However, some generation codes cannot be copied in this manner. Word Perfect offers some library styles with the program, but there are no true automatic style sheets.

Score: Satisfactory.

Wordstar doesn't support style sheets, although you can keep a style library that you can access from any document. You can also record styles by example. There are no automatic style sheets included with Wordstar.

Score: Satisfactory.

PERFORMANCE: FONT/PRINTER SUPPORT

Font and printer support includes all HP and Postscript fonts plus a host of other fonts. There is a printer driver editor, kerning, and tracking, as well as landscape printing capability.

Score: Excellent.

Font and printer support includes all HP and Postscript fonts plus a host of other printers. There is also some capability to kern text in pairs. Wordstar allows you to select bold, underline, and super or subscript. The program also offers landscape printing on laser printers.

Score: Good.

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Word/Windows, Continued on Page 61

Word Perfect, Continued on Page 61

Wordstar, Continued on Page 61
**Performance: Reference Tools**

Ami Professional's reference tools are the weakest part of the product: they are much less effective than in Microsoft Word for Windows or Word Perfect. Ami supports only pages of contents and one index. The program also lacks a true outline: although there is the capability to number entries automatically, footnotes can be gathered at the end of the document where they are automatically numbered, but you cannot have concurrent endnotes and footnotes. Score: Satisfactory.

DisplayWrite 5's reference tools include standard numbering capabilities, as well as various levels for indexes and tables of contents. The program cannot index across multiple documents. The program also supports endnotes and footnotes, although you cannot have both in the same document. Numbers are updated when pagination occurs and footnotes can be customized. Score: Good.

Legacy has solid indexing with cross references and a reasonable table of contents facility. However, its notes system, in spite of superior capabilities for the format itself, lacks the capability to produce endnotes easily. The outline uses variable number schemes but does not collapse or expand outline sections on-screen. Score: Satisfactory.

Multimate's reference tools are primitive. There is no outlining, although the program does have some numbering capability. The program will index and can make the index serve as a table of authorities, but the table of contents feature is not very flexible. You can have footnotes or endnotes but not both in the same document. Sorting can only be done by line and only on one page. Score: Poor.

**Performance: Import/Export**

The range of compatible text and graphic formats is large and includes the standard ASCII formats. There are also numerous word processing formats such as Word for Windows, Word Perfect, WordStar, and Word. Ami also supports the graphic formats from Lotus PC files as well as EPS, TIFF, HPGL, and Windows Metafile. There is a table that describes what will be translated between formats. Score: Excellent.

ASCII and DCA/RFT are the only text formats supported by DisplayWrite 5, although it will take in a range of data files for mail merge. In addition, a separate graphics convert program can import Lotus 1-2-3 PIC, Fontaine GMP, and Harvard Graphics CMY into Displaywrite documents. Composer has a much wider range of graphic import tools that cover most popular graphics formats including scanners. Score: Good.

Legacy supports a large range of text and graphic formats, including DCA/RFT, PCX, Microsoft Word 4.0 and 5.0, Word Perfect 4.0 and 5.0, WordStar 4.0 and 5.0, and a host of others. Although Legacy does not yet support Lotus PIC, the program has one of the most complete import/export systems we have seen. Score: Excellent.

A comprehensive import/export capability covers a wide range of text formats, including DCA/RFT, Word Perfect, WordStar, Microsoft Word, Office Writer, and PFS: First Choice. For graphics, Multimate can import and export PCX, Lotus PIC, and other formats such as CGM, TIFF, PCL, and more. Score: Excellent.

**Performance: Network**

If a network user attempts to open an Ami document that somebody else is already editing, Ami will automatically open the read-only mode. The file may be edited, but changes can only be saved if the file is given a new name. Ami handles a variety of network configuration, including network, in user's own network, independent of the Ami program itself. Score: Very Good.

DisplayWrite 5 does not allow any access to an already open document file. The program stores user preferences in a private directory. Printer drivers remain with the main program files but can be configured in user's preferences files. Score: Poor.

Legacy is networkable, although NBI does not recommend it. The program will not allow multiple users to open the same file, even in read-only mode. Configuration is Windows-based; we had no problems managing multiple users. Score: Poor.

Multimate does not support multiple user access to document files. User preferences are stored, by default, in users' private directories, as are user dictionaries.

**Performance: Speed**

Ami Professional performed well in our complex document speed tests, which are comparable to speed tests of Word for Windows. In our simple document benchmarks, Ami was a solid performer and just a step behind the speedy Word for DOS. Score: Very Good.

DisplayWrite 5 was a solid performer in our on-screen speed tests, outpacing WordPerfect. DisplayWrite 5's print times are especially strong. Score: Good.

Legacy was in the middle of the pack in our speed tests. It was slower than Ami Professional and Word for Windows in both the simple and the complex document tests, but it was a lot quicker than DisplayWrite 5's Composer. Legacy's print times, however, were especially slow. Score: Satisfactory.

Multimate performed well in tests of our complex file speed tests, including opening and saving files. The product did, however, have some problems with our complex file in that it cannot handle proportional spaced output. We were unable to benchmark output to a Postscript printer. Score: Satisfactory.

**Performance: Macros**

Ami has a full macro language with control statements, programming constructs, and the like, as well as a keystroke recorder. The macro manual is on disk, although you can ask for a free printed copy with registration. Score: Excellent.

DisplayWrite 5 will record keystroke macros and assign them to a function key, but there is no macro programming language. Score: Satisfactory.

Legacy does not support macros, except through the macro capability of Windows. Score: N/A.

Multimate's keystroke macros and a macro recorder are included, but there is no macro programming language or other macro commands. Score: Satisfactory.

**Documentation**

Ami's documentation is reasonably complete except for the missing macro manual, which is available on-line and printed by special request. Unfortunately, it is necessary to refer to both the user's manual and the Ami Professional document set to have a complete reference to the program's features. Ami also has sold off-line help, which is similar to the on-line help in other Windows products. Score: Good.

DisplayWrite 5 has comprehensive and clear documentation. Although the information is clear, there are too many different booklets, and the indexes are marginal. Score: Satisfactory.

Legacy's documentation covers most user needs. With a getting-started booklet, reference manual, and a special block on document design, Legacy's documentation covers most user needs. We would have preferred an alphabetically arranged reference manual, but the topical organization works well and the indexes are fine. The on-line help is very complete and effective. Score: Very Good.

Multimate's documentation is clear and well indexed, but there are very few examples. For example, the documentation is not clear about explaining the process for previewing and using proportionally spaced text capabilities. Score: Satisfactory.
Product Comparison

January 7, 1991

Performance: Reference Tools

Word has a true outline that collapses and expands sections on-screen. You can have nested index entries, and tables of contents can be built from the document's outline. Footnotes can be at the end of the document or the bottom of the page. However, you cannot produce correct citations and footnotes.
Score: Very Good.

Reference tools include a powerful outline editor with collapsible sections, table of contents and indexing, additional lists and tables, and many numbering schemes for outlining. In addition, there are complete review and marking facilities on document histories, such as the date a document was created or who was the last person to edit it. However, Word for Windows does not do endnotes and footnotes concurrently within the same document.
Score: Very Good.

Performance: Import/Export

Import and export options include the basic ASCII and DCA/RFT text formats and PCX and Lotus PCX graphics formats. Word can handle a number of other graphic formats such as TIFF and HPGL, however, its limited text importing lowers its score here.
Score: Good.

Word for Windows imports and exports a large number of text formats, such as Displaywrite 5, Multimate, Word for DOS, Word for Macintosh, and Word Perfect. Word for Windows also imports and exports graphics formats including PCX, Lotus PCX, TIF, Multimate, CGM, and Micrographix. The conversion method for text is very simple and works easily and well.
Score: Excellent.

Performance: Network

Word 5.5 will not allow access even remotely, to an already-open file. However, multiple users can open the same file if they all check the "read-only" box when opening the document. (A file opened this way can be saved under a new name.) Spellings dictionaries and printer drivers can be stored in private directories.
To set up multiple users' preferences, you have to run the included setup program for each user, which is a potentially time-consuming process.
Score: Satisfactory.

If you attempt to open a file that is being edited by another user, Word for Windows will automatically open it in read-only mode, and let you save changes after you give the document a new name.

Configuration is handled through Windows and all preferences are stored in individuals' private files.
Score: Very Good.

Performance: Speed

Word was the quickest product in nearly all of our benchmark tests, both simple and complex file tests. Its times were less than a second in eight categories, and it also broke the fastest print times.
Score: Excellent.

Word for Windows is a quick Windows product, and its benchmark times were comparable to Ami Professional's. It is not as fast as its DOS counterpart, but it is a solid overall performer.
Score: Very Good.

Word Perfect is an overall quick product. Its benchmark times were just a notch behind Word 5.5, which was the fastest performer in this comparison. Word Perfect was especially quick in our global search and replace for the sample file, and its print times were fast as well.
Score: Excellent.

Performance: Macros

Word's macro capabilities include a macro recorder and programming constructs that permit sophisticated macro construction. However, Word 5.5's macros are completely incompatible with Word 5.0.
Score: Very Good.

A macro language called Word Basic includes a complete set of programming constructs plus special hooks into Word's word processing engine. There is a macro recorder and editor. There are also custom dialog boxes, as well as full support of Dynamic Data Exchange.
Score: Excellent.

A complete macro language includes programming constructs and Word Perfect functions. A mini macro editor facilitates macro programming as does a macro recorder. Although Word Perfect's macro facility is strong, it is not quite as powerful as Word for Windows.
Score: Very Good.

Documentation

Word's documentation is well presented and complete with solid indexes and on-line help. You can reference on-line help when you receive error messages. Word also has a fine on-line tutorial.
Score: Very Good.

Documentation is clear and of high quality, but sometimes it is necessary to look in several places to get a complete picture. An on-disc macro manual is included, although a printed macro manual is not provided with the program; a printed manual is free on request. The program also includes an on-line tutorial.
Score: Very Good.

Word Perfect has one reference manual with everything arranged alphabetically. This, coupled with a good index, provides an effective reference source. There is also context-sensitive help, as well as an on-line tutorial for the beginner.
Score: Very Good.

Wordstar can automatically number text entries, set up outline formats, and support more than three outline numbering levels. In addition, an add-on program called PC-Outliner offers sophisticated outlining but with marginal integration into Wordstar documents. There are multiple-level indexes and tables of contents. Wordstar offers concurrent endnotes and footnotes and changing from one to the other is relatively simple.
Score: Very Good.

Some text file formats can be brought into Wordstar directly, including several varieties of ASCII in several versions, and DCA/RFT. A sophisticated text conversion add-on that offers nine other text formats, called Star Exchange, is included. However, it does not handle graphics formats other than those that can be captured by insert. Wordstar's graphics add-on.
Score: Satisfactory.

Wordstar will let you read a file that another user is editing, but you won't be able to save your changes. Spellings dictionaries are stored in user directories.

The program also keeps configuration information and printer driver files in user directories.
Score: Satisfactory.

Wordstar's speed is competitive with Word for Windows and Ami Professional. Though it is slower than Word for DOS, it is quicker than other equivalent programs such as Displaywrite and Multimate.
Score: Excellent.

Wordstar supports recorded keystroke macros but not programmable macros. The keystroke macros are an effective implementation, although there are no programming constructs such as "if" and "while." Score: Satisfactory.

Wordstar's documentation has improved in this version. There are clear instructions in the various books, as well as solid indexes. The program also offers a tutorial, and there are on-line help messages.
Score: Very Good.

Word/Windwos, Continued on Page 65
Word Perfect, Continued on Page 65
Wordstar, Continued on Page 66
Ami’s graphical user interface is easy to learn for users familiar with Windows, but not for users who have never used computers. The Windows interface contributes to the ease of learning. On a single level, Ami is extremely easy to learn. Powerful features, however, always require time and attention to use properly. Score: Very Good.

The clumsy modular structure and the difficulty of understanding the relationship of DisplayWrite 5 to Composer reduce the ease of learning. Users must have the main menu to change functions. Composer uses a different menu structure, which can confuse new users. Score: Satisfactory.

Once you have been introduced to Ami’s predefined and customized, the program is quite easy to use. It has pull-down menus, ribbons, and rulers. The program is fairly customizable via its sophisticated macros, languages and various other use features. Score: Very Good.

Fairly easy to use for standard text and emphasis. The choice of Composer sets this program apart from others. Composer is a good choice for users who want a more flexible and customizable program. Score: Very Good.

While relatively easy to use, the absence of a sophisticated macro capability will frustrate advanced users. The program also has a clumsy process for endnotes, and the lack of true windowing detracts from an experienced user’s effectiveness. However, Legacy does handle many complex layout features gracefully. Score: Satisfactory.

Normal errors cause no difficulty, and Ami’s built-in help will assist. It creates temporary files on the disk that it doesn’t create automatically, but it doesn’t cause problems. Score: Very Good.

Normal errors do cause DisplayWrite 5 resource limitations. There is no timed backup, but the program will make an automatic backup of the original when you start a new document. There is a useful recovery operation for power failures. You can also recall the last deleted block. Score: Good.

Toll-free telephone support is available through December 31, 1992, and this date may be extended. Support hours are Monday through Friday, 9 a.m. to 6 p.m. Central time. IBM does not offer fax support, though this will be on CompuServe in January. Score: Satisfactory.

Legacy traps common errors easily, has backup options, and provides feedback. Legacy is a good choice for the editor who wants to be assured an editor as well as frame graphic changes. However, there is no timed backup. Score: Good.

NBI offers unlimited toll-free support from 7 a.m. to 5 p.m. Mountain time, Monday through Friday. The company also offers BBS on CompuServe, and fax support. There is a document mailer service. NBI will issue your fax document and advise you to which Legacy features could be used. Score: Good. Legacy, Continued on Page 66.

IBM offers a same-day money-back guarantee if the product fails to perform as specified. There is phone support via a toll-free line from 8 a.m. to 7 p.m., Eastern time, as well as support on CompuServe. There is also fax support, and corporate exchanges policies are available. Score: Very Good.

Multimate has a backup procedure that saves each copy of the document before editing, and the program writes pages to disk frequently. The undo is multilabeled with a last in/first out delete buffer that captures deletes and deletes. However, the buffer is flushed when the document is rewritten. There is no timed backup. Score: Satisfactory.

Toll-free telephone support is available at different levels for different annual fees. There is free, but not toll-free phone support from 8 a.m. to 4:30 p.m., Monday through Friday, and on Saturday from 6 a.m. to 9 p.m. There is also BBS support via CompuServe and fax support. Score: Satisfactory.

Multimate, Continued on Page 66.
**PRODUCT COMPARISON**

**EASE OF LEARNING**

Word is reasonably easy to learn, especially with the improved interface. The program now has pull-down menus and speed keys, which will help novices adapt and learn quickly. The old interface. Word has a graphics format that shows illegal and bold on the screen, which may be helpful to some users, but is not equivalent to WYSIWYG. Score: Very Good.

New users, particularly if they have had Windows experience, learn Word for Windows quickly. Considering the program's capabilities, it is extremely easy to master. Ribbon, rulers, WYSIWYG editing, and a very effective on-line help system contribute to ease of learning. Score: Excellent.

With an on-screen tutorial, a learning manual, a comprehensive on-line help system, and now pull-down menus, Word Perfect is relatively easy to use. Its high complexity and great power, however, cause some difficulties. Because of its user interface, the product is not quite as easy to learn as the graphical word processors in this group. Score: Very Good.

Wordstar, using its traditional control-key commands, is relatively easy to learn. However, the complexity of the program and the inconsistencies with some of the add-on programs that require different key combinations and menu structures may intimidate a new user. Score: Good.

**EASE OF USE**

Word's menus and multiple methods of accessing functions makes word relatively easy for experienced users. Word has a draft mode and a graphics mode that shows more detail for editing. The improved interface over Version 5.0 also enhances Word's ease of use. Score: Very Good.

With experience, Word for Windows becomes very easy to use thanks to effective menus, speed keys, multiple ways to access commands, multiple views of text, snappy response, and customizable screen and command displays. Score: Excellent.

The structure, menus, and customization options such as the ability to use double or single columns on-screen, or to change the way the text is displayed, all contribute to its ease of use. The program's capability to display all codes, preview results, and construct macros also combine into an easy-to-use environment. Score: Very Good.

Wordstar's always maintains a backup file and prompts before exiting without saving. There is a one-level undo. Score: Good.

**ERROR HANDLING**

Word 5.5 has automatic timed backup and crashes that prompt you before exiting a document without saving. One-level undo captures deletes, backspaces, and inserting. Score: Good.

Word for Windows captures errors effortlessly, handles undo and redo effectively, and allows you to redo and undo delete and backspace as well as formatting and many other procedures. While there is no auto-backup as in Word 5.5, Word for Windows can be set to remind you to have a document after a period of editing. Score: Good.

Word Perfect offers multiple saving options such as various automatic timed saves, as well as a three-level undo that will restore backspaced or deleted text. There is also timed automatic saving, thus allowing Word Perfect to handle most errors well. Score: Excellent.

**SUPPORT POLICIES**

Microsoft offers a 30-day money-back guarantee and a 90-day guarantee that the product will perform properly. There is unlimited free, although not toll-free, support from 6 a.m. to 6 p.m. Pacific time. Microsoft also offers BBS support and corporate extended support policies. Score: Very Good.

There is a 30-day money-back guarantee of satisfaction and a 90-day guarantee that the product will work as described. There is free, but not toll-free support from 8 a.m. to 6 p.m. Pacific time, Monday through Friday. Fax and BBS support, and corporate extended policies are available. Score: Very Good.

WordPerfect support remains the best in the industry with 24-hour phone support. Phone support is toll-free from 7 a.m. to 6 p.m. Pacific time (not toll-free after 6 p.m.). There is a bulletin board on CompuServe, a money-back guarantee, fax support and extended support policies. Score: Excellent.

Wordstar offers 30-day money-back warranty. There is free, but not toll-free phone support from 7 a.m. to 9 p.m. Pacific time, Monday through Friday. Wordstar also offers fax support, BBS support via CompuServe, and corporate extended support. Score: Good.

**PRODUCT SUMMARY**

**Microsof**

**Microsoft Word**

**Version 5.5**

Company: Microsoft Corp., 1 Microsoft Way, Redmond, WA 98052-6399 (800) 426-9400.

List Price: $450.00 ($90 for upgrade from 5.0. $75 for upgrade from 1.0 or 2.1).

Requires: IBM PC or compatible, 384K of RAM, minimum 8MBS recommended, graphics card for preview, two floppy disks or hard disk, mouse is optional (DOS 2.0 or higher).

Pros: Best basic editor, strong performance and features, much improved interface, powerful macros, solid spell checking.


Summary: A robust character-based program that has most professional features. A strong program for users who will switch between Windows and Microsoft Word, which share user interface characteristics.

**Microsoft Word for Windows**

**Version 5.0**

Company: Microsoft Corp., 1 Microsoft Way, Redmond, WA 98052-6399 (800) 426-9400.

List Price: $450.00.

Requires: IBM PC or compatible, 384K of RAM, minimum 8MBS recommended, graphics card recommended, mouse recommended, graphics display.

Pros: Outstanding use of Windows, strong editing and layout, exceptional macro language, complete graphics and tables, adequate sorting, caption merging, outstanding all around performance.

Cons: Slow down in Windows editing, especially with tables, spell checking less effective at generating words.

Summary: The best all-around Windows word processor. Word for Windows offers strong tools in almost every area, unless complex graphics are required. Consistently good in professional offices.

**WordPerfect**

**Version 5.0**


List Price: $450.00.

Requires: IBM PC or compatible, 80K RAM minimum, DOS 2.0 or higher.

Pros: Excellent graphics, very fast, extensive Editing, spell checker, built-in printer support.

Cons: Slow down in Windows editing, especially with tables, spell checking less effective at generating words.

Summary: Less elegant than the graphically based programs such as Word for Windows or Ami, it nonetheless has more usable features than those programs, recommended for high-volume complex documents, graphics, and merge make in professional offices.

**Wordstar**

**Version 5.0**


List Price: $595.

Requires: IBM PC or compatible, 384K of RAM minimum, 512K for full function, 2 floppy disk minimum, hard disk for hard floppy, printer is required for page preview, DOS 2.0 or higher.

Pros: Strong editing tools, solid spell checking, text on-screen resources, and document tools have sophisticated editors and a suite of telecommunications packages. Main program user interface is entirely suited to touch input.

Cons: Character-based interface which is not as good as input with old DOS programs, limitations on layout, tables, macros include keyboard only, limited graphics, and text editing, limited graphics integration.

Summary: Wordstar remains the leading program of choice for touch input. Wordstar has all of the extras, and it offers many features with its data base programs. However, the text is not as strong as Microsoft Word, its features and price no longer compete with the market.
EASE OF LEARNING

Displaywrite 5 (continued)

The clumsy modular structure and the difficulty of understanding the relationship of Displaywrite 5 to Computer reduce ease of learning considerably. Users have to return to the main menu to take advantage of all functions, and Compose uses different menu structures which can confuse new users. Score: Satisfactory.

Taking its complexity into account, Legacy proves remarkably easy to learn. A strong tutorial, solid documentation, and an interface that can be used to facilitate learning. Obviously, those new to Windows will have more to learn than experienced users. Score: Very Good.

Multimate (continued)

Multimate is especially easy to learn for users familiar with the non-objective Wang dedicated word processing system. Multimate also has a modular system that helps to speed up the learning process. Online help is minimal. Score: Satisfactory.

EASE OF USE

Displaywrite 5

Fairly easy to use for standard text and general office correspondence. Displaywrite 5 with Composer becomes quite clumsy for complicated formatting chores or complex documents. The keyboard functions key macros are good, but the product is not very customizable or adaptable. Score: Satisfactory.

While relatively easy to use, the absence of a sophisticated macro capability will frustrate advanced users. The program also has a clumsy process for editing, and the lack of true windowing detracts from an otherwise user-friendly effectiveness. However, Legacy does handle many complex layout features gracefully. Score: Satisfactory.

ERROR HANDLING

Displaywrite 5

Normal errors cause no difficulty, and Ami Pro provides test with automatic timed backups. It creates temporary files on the disk that it doesn't always automatically. Score: Very Good.

Normal errors cause Displaywrite 5 minimal problems. There is no timed backup, but the program will make an automatic backup of the original when you start an edit. Sorts are done in a secondary. There is also a useful recovery operation for power failures. You can also recall the last deleted block. Score: Good.

Legacy traps common errors easily, has backup options, and prompts before exiting (saving text). There is a one-level undo and redo. The undo/redo will back up the entire program, and it is very flexible. There is no timed backup. Score: Good.

Support Policies

Displaywrite 5

Toll-free telephone support is available until December 31, 1972, and this date may be extended. Support hours are Monday through Friday, 8 a.m. to 5 p.m. Mountain time. The company offers service through its BBS service, and the company will supply a service diskette. Score: Satisfactory.

Multimate has a backup procedure that preserves a copy of the disk before editing. The company provides a service diskette. Score: Satisfactory.

PRODUCT SUMMARY

Displaywrite 5

Company: IBM Corp., Box 2150, Atlanta, GA 30301.
List Price: $495.

Multimate

Company: Ashton-Tate Corp., Mountain View, CA 94043.
List Price: $299.

IBM Professional

Company: IBM Development Corp., Woodside Division, 9000.004B
List Price: $199 for network license.

Multimate

Company: Ashton-Tate Corp., Mountain View, CA 94043.
List Price: $599.

IBM Professional

Company: IBM Development Corp., Woodside Division, 9000.004B
List Price: $199 for network license.
EASE OF LEARNING

Word is reasonably easy to learn, especially with the improved interface. The program now has pull-down menus and speed keys, which will help novice adopt more quickly than with the old interface. Word has a graphically formatted tool that shows in a window, which may be of help to some users, but it is not equivalent to WYSIWYG.

Score: Very Good.

New users, particularly if they have had Windows experience, learn Word for Windows quickly. Considering the program's capabilities, it is extremely easy to master. Ribbons, rules, WYSIWYG editing, and a very effective on-line help system contribute to ease of learning.

Score: Excellent.

With an on-screen tutorial, a learning manual, a complete on-line help system, and now pull-down menus, Word Perfect is relatively easy to use. Its high complexity and great power, however, cause some difficulties. Because of the user interface, the program is not quite as easy to learn as the graphical word processors in this group.

Score: Good.

Wordstar, using its traditional control-key commands, is relatively easy to learn. However, the complexity of the program and the inconsistencies with some of the add-on programs that require different keyboards and menu structures may intimidate a new user.

Score: Good.

EASE OF USE

Word's menus and multiple methods of accessing functions makes work relatively easy for experienced users. Word has a good, multi-tabbed icon that shows more detail for editing. The improved interface over Version 3.0 also enhances Word's ease of use.

Score: Very Good.

With experience, Word for Windows becomes very easy to use thanks to effective macros, speed keys, multiple ways to access commands, multiple views of text, snappy response, and customizable screen and command displays.

Score: Excellent.

The structure, menus, and customization options such as the ability to set double or single columns on-screen, or to change the way the text is displayed, all contribute to its ease of use. The program's capability to display all codes, preview results, and custom macros also combine into an easy to use environment.

Score: Very Good.

ERROR HANDLING

Word 5.5 has automatic timed backup and messages that prompt you before exiting a document without saving. One-level undo captures edits, backspaces, and formatting.

Score: Good.

Word for Windows captures errors effortlessly, handles undo and redo effectively, and allows you to redo and undo backspaces as well as formatting and many other procedures. While there is no automatic backup as in Word 5.5, Word for Windows can be set to remind you to save a document after a period of editing.

Score: Good.

Word Perfect offers multiple saving options such as automatic timed saves, as well as a three-level undelete that will recover backspaced or deleted text. There is also automatic saving, thus allowing Word Perfect to handle most errors well.

Score: Excellent.

SUPPORT POLICIES

Microsoft offers a 30-day money-back guarantee and a 90-day guarantee that the product will perform properly. There is unlimited free, although not toll-free, phone support from 8 a.m. to 6 p.m. Pacific time. Microsoft also offers BBS support and corporate extended support policies.

Score: Very Good.

There is a 30-day money-back guarantee of satisfaction and a 90-day guarantee that the product will perform as advertised. There is free, but not toll-free support, from 8 a.m. to 6 p.m. Pacific time. There is a bulletin board on CompuServe, a telephone support, fax support and extended extended support policies available.

Score: Very Good.

WordPerfect support remains the best in the industry with 24-hour phone support. Fax support toll-free from 8 a.m. to 6 p.m. Pacific time. There is a bulletin board on CompuServe, a telephone support, fax support and corporate extended support policies available.

Score: Very Good.

Wordstar International offers a 90-day warranty. There is free, but not toll-free, phone support from 9 a.m. to 5 p.m. Pacific time. Monday through Friday Wordstar also offers fax support, BBS support via CompuServe, and corporate extended support.

Score: Good.

PRODUCT SUMMARY

Microsoft Word

VERSION 5.5

Company: Microsoft Corp., 1 Microsoft Way, Redmond, WA 98052-6399 (800) 426-9400

List Price: $450; $50 for upgrade from 3.0; $75 from version 1.x or 2.x

Requires: IBM PC or PS/2 or compatible, 286K4 or RAM, minimum 512K recommended; graphics card for Preview, two floppy disks or hard disk; mouse is optional: DOS 2.0 or higher

Pros: Best basic editor, strong performance and features, much improved interface, powerful macros, solid spelling checker.

Cons: Lack of the visual generator, limited file import, no forms, no templates.

Summary: A robust character-based program that has most professional features. A strong program for users new to word processing. The interface is improved and adds many new features, such as keyboard shortcuts and automatic formatting. Wordstar Word, which share user interface characteristics.

Microsoft Word for Windows

VERSION 1.1

Company: Microsoft Corp., 1 Microsoft Way, Redmond, WA 98052-6399 (800) 426-9400

List Price: $695

Requires: IBM AT or compatible, 480K RAM, minimum 512K recommended, mouse recommended, graphics display, Preview, strong editing and layout, exception matrix language, powerful macros, spelling checker, graphics display.

Pros: Outstanding use of Windows, strong editing and layout, exceptional matrix language, powerful macros, spelling checker, graphics display, Preview, strong editing and layout, exception matrix language, powerful macros, spelling checker, graphics display.

Cons: Somewhat slow response in Preview, limited code, with what is missed, spellchecker less effective at guessing words.

Summary: The best all-around Windows word processor. Word for Windows offers strong tools in almost every area. However, some important features, such as automatic text output, are only available with individual text streams or very complex programs. It is likely to be the program of choice.

PRODUCT SUMMARY

Word Perfect

VERSION 5.1

Company: Word Perfect Corp., 1555 N. Technology Way, Orem, UT 84057 (801) 225-5000

List Price: $695

Requires: IBM PC or compatible, 384K RAM, minimum 512K DOS 2.0 or higher, graphics display, Preview, Windows, mouse recommended, mouse recommended, graphics display, Preview, strong editing and layout, exception matrix language, powerful macros, spelling checker, graphics display.

Pros: Best in class for features and price, strong graphics, footnotes and endnotes, revision marking, tables of authorities, matrix language, powerful macros, and printer support, superior support from company.

Cons: Character-based interface does not allow editing in WYSIWYG complexity can hinder ease of learning.

Summary: Less powerful than the graphically based programs such as WordStar or WordStar Word, but nonetheless has more powerful features than these programs. Recommended for high-volume complex documents, graphics, and mail merge tasks in professional offices.

PRODUCT SUMMARY

Wordstar

VERSION 5.0

Company: Wordstar International, 291 Alameda del Paso, Novato, CA 94949 (800) 827-5609

List Price: $195

Requires: IBM PC or compatible, 384K RAM, minimum 512K DOS 2.0 or higher, graphics display, Preview, strong editing and layout, exception matrix language, powerful macros, spelling checker, graphics display.

Pros: Strong spelling checker, solid support, thorough, and documentation includes technical details and on-line help commands, comprehensive, one-day training. Wordstar user interface especially suited to touch typists.

Cons: Inconsistent user interface with lots of on-line programs, limitations on output tools, menus lack key stroke only limited readers and fonts, limited graphics integration.

Summary: Wordstar remains the most popular microcomputer program of choice for word processing. Wordstar has all of the above, and adds many new features, but lacks on-line programs. However, in the end, it is not as strong as Microsoft Word. Its features and price no longer correspond with the market.
At $495, this product fits right into the top of the market with the high-power products in this summary. Ami's graphics capabilities and competent performance in practically every area make it a strong—though not as special its features other programs offer—good choice. "Excellent." Score: Excellent.

At $495 for DisplayWrite 5 and $395 bundled with Composer, IBM offers strong features for novices who need to create and manage tasks and complicated layout and graphic applications. The program is weaker in its legal or research-paper capability, however. Legacy has an outstanding capability to produce newsletters and brochures as well as to handle ordinary correspondence and reports. "Good." Score: Good.

Legacy, priced at $495, offers strong features for offices with modest mailmerge tasks and complicated layout and graphic applications. The program is weaker in its legal or research-paper capability. However, Legacy has an outstanding capability to produce newsletters and brochures as well as to handle ordinary correspondence and reports. "Good." Score: Good.

Multimate offers considerably less than other programs in this category. Multimate cannot compete with Word Perfect! or other top-notch character-based word processing programs. "Poor." Score: Poor.
Microsoft's product support was technically correct and efficient. Waiting times were relatively short. **Score: Very Good.**

Calls to Microsoft technical support for Word for Windows produced competent and effective help on a variety of technical problems. **Score: Very Good.**

By means of product support specialists, Word Perfect technical support continues its tradition of quality with competent technicians who take considerable pains to resolve problems and answer questions. **Score: Very Good.**

Our experience with technical support was positive. Answers to technical questions were correct and helpful. Wordstar's CompuServe forum also has used comments and suggestions as well as occasional participation by Wordstar personnel. **Score: Very Good.**

At $495, Microsoft Word 5.5 represents a reasonable value for users who do not have the hardware to support Word for Windows. It is a powerful product that offers extremely sophisticated editing capabilities. **Score: Very Good.**

At $495, Word for Windows provides close to state-of-the-art functions in most areas of professional word processing. Although not as powerful in some ways as Word Perfect and somewhat less effective as a layout tool than Legacy, Word for Windows remains the strongest overall of the Windows word processors. **Score: Excellent.**

The standard $495 price represents a fine value for this product, which has withstood some formidable competition. Currently at the top of the heap for power and features, Word Perfect will find it necessary to update its product with all of its capabilities to graphical environment to stay competitive with Word for Windows. **Score: Excellent.**

At $495, Wordstar 6.0 offers solid features and performance as a character-based product in this group. In comparison to Microsoft Word 5.5, Wordstar is just a notch below with its features and capabilities. However, it is a superior product to Multimate 4.0. **Score: Good.**

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**BENCHMARKS**

**Professional Word Processors: 386 Benchmarks**

<table>
<thead>
<tr>
<th>File operations/simple file</th>
<th>Ami Professional 1.2.9</th>
<th>DisplayWrite 6 Legacy 1.0</th>
<th>Multimate 4.0</th>
<th>Microsoft Word 5.5</th>
<th>Word For Windows 1.1</th>
<th>Word Perfect 5.1</th>
<th>Wordstar 6.0</th>
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