Update to Wordstar Will Find a Home With Touch-Typists
Version 6.0 has improved paragraph style function, superb page preview, strong printer support.

BY Josh Landman
CONTRIBUTING EDITOR

Wordstar's Versions 4 through 5.5 brought the program within reach of many of the best professional word processors, and this most recent revision, numbered 6.0, offers some useful improvements. For example, Wordstar now supports the Hewlett-Packard LaserJet III printer and several new printer fonts. For a more comprehensive look, refer to the January 29 product comparison on word processing (Page 9) and the July 3, 1988 review (Page 55).

FEATURES:
Version 6.0 continues with the Wordstar tradition of enhancing the program by attachment. In this, as in the previous version, the basic Wordstar word processing engine includes attachments that bring extra features to the user without requiring a major rewrite of the underlying program.

One of Wordstar's most attractive features has always been its orientation toward touch-typists, those skilled technicians whose dexterity for function keys is exceeded only by their fundamental disdain for mice and other pointers. This version, like 5.5, has pull-down menus accessed by Alt-key combinations and a point/selection system for using these menus. Everything can still be done with Ctrl-key combinations.

This update improves the program's paragraph style function, which attaches a group of characteristics to a paragraph, including fonts, margins, justification, and line heights to a paragraph and all subsequent paragraphs until the next style code is inserted. These styles can be saved by name and attached to a group, a concept pioneered in microcomputer word processing by Microsoft Word and adopted by most heavy-duty systems. Wordstar's implementation of this feature is reasonably strong and is copiously documented in the manuals. The program also supports a variety of new printer fonts such as the scalable fonts used in Postscript and the new Hewlett-Packard LaserJet III printer.

Wordstar 6.0 has page preview, although no editing is possible in the preview mode. The preview allows text in a wide area of formats, such as magnified sections of a page, single pages, facing pages, or whole books. The preview also shows how the text will look on a page before being printed.

CD-ROM EXPO

For complete conference program information and registration forms, visit the CD-ROM Expo web site at www.computerworld.com.

Or call, toll-free, 800-225-4698.

Yes! I'd like more information on attending the 4th annual CD-ROM Expo on October 1-5, 1990 at the World Trade Center in Boston.

Name ___________________________ Title ___________________________
Company ___________________________
Address ___________________________
City/State/Zip ___________________________
Business phone ___________________________
Fax ___________________________

Please send me information on attending at CD-ROM Expo.

CD-ROM Expo is produced by Word Expo Corporation, a subsidiary of Wordstar Corporation.
WordStar 6.0 has better-than-average layout capabilities, although it does not show multiple columns side by side. The screen does automatically set up columns, and the page preview is effective. If your text goes beyond the right of the screen, you will have to scroll horizontally to view the rest of the text. Layout is rated good.

WordStar 6.0’s on-screen graphics provide less-than-average graphics integration. While the program will handle such things as line feeds, WordStar 6.0 attaches a graphic image with a special nonprinting tag line inserted in the text and does not automatically a 300-line clip art, comments, and footnotes to be used in the same document. A dot command will convert this into a 300-line clip art image, and the like, a useful enhancement. We rate footnoting very good.

Macros, called shorthand macros in WordStar, provide the basic keystroke capture with test and commands that can be stored in a file and reused. Although the WordStar macro feature is an acceptable implementation, it cannot double as a word processor programming language for complex tasks requiring constructs or variables, for example, as can be in Word or Word Perfect. We rate macros satisfactory.

WordStar 6.0’s printer support is strong. The program supports a wide range of printers with scalable fonts. Postscript, and soft fonts, as do the rest. WordStar has a good printer modification program for custom adjustment. Printer support is rated excellent.

WordStar 6.0’s on-screen graphics provide less-than-average graphics integration. While the program will handle such things as line feeds, WordStar 6.0 attaches a graphic image with a special nonprinting tag line inserted in the text and does not automatically a 300-line clip art, comments, and footnotes to be used in the same document. A dot command will convert this into a 300-line clip art image, and the like, a useful enhancement. We rate footnoting very good.

Macros, called shorthand macros in WordStar, provide the basic keystroke capture with test and commands that can be stored in a file and reused. Although the WordStar macro feature is an acceptable implementation, it cannot double as a word processor programming language for complex tasks requiring constructs or variables, for example, as can be in Word or Word Perfect. We rate macros satisfactory.

WordStar 6.0’s printer support is strong. The program supports a wide range of printers with scalable fonts. Postscript, and soft fonts, as do the rest. WordStar has a good printer modification program for custom adjustment. Printer support is rated excellent.

WordStar 6.0’s on-screen graphics provide less-than-average graphics integration. While the program will handle such things as line feeds, WordStar 6.0 attaches a graphic image with a special nonprinting tag line inserted in the text and does not automatically a 300-line clip art, comments, and footnotes to be used in the same document. A dot command will convert this into a 300-line clip art image, and the like, a useful enhancement. We rate footnoting very good.

Macros, called shorthand macros in WordStar, provide the basic keystroke capture with test and commands that can be stored in a file and reused. Although the WordStar macro feature is an acceptable implementation, it cannot double as a word processor programming language for complex tasks requiring constructs or variables, for example, as can be in Word or Word Perfect. We rate macros satisfactory.

WordStar 6.0’s printer support is strong. The program supports a wide range of printers with scalable fonts. Postscript, and soft fonts, as do the rest. WordStar has a good printer modification program for custom adjustment. Printer support is rated excellent.

WordStar 6.0’s on-screen graphics provide less-than-average graphics integration. While the program will handle such things as line feeds, WordStar 6.0 attaches a graphic image with a special nonprinting tag line inserted in the text and does not automatically a 300-line clip art, comments, and footnotes to be used in the same document. A dot command will convert this into a 300-line clip art image, and the like, a useful enhancement. We rate footnoting very good.

Macros, called shorthand macros in WordStar, provide the basic keystroke capture with test and commands that can be stored in a file and reused. Although the WordStar macro feature is an acceptable implementation, it cannot double as a word processor programming language for complex tasks requiring constructs or variables, for example, as can be in Word or Word Perfect. We rate macros satisfactory.
HP Vectra 486 Features Disk Speed and Compatibility

BY ANDRE KVITKA TEST CENTER
AND TRACEY CAMER
ASSOCIATE REVIEWS EDITOR

After a rocky start caused by bugs in the Intel 80486 chip, compatibility problems with the EISA chip set, Hewlett-Packard Co. has released its most powerful PC, the Vectra 486. Announced in October 1989, HP started shipping its newest addition to the HP Vectra line of personal computers in February. The Vectra 486 features a 25-MHz 80486 processor, lower power, Extended Industry Standard Architecture (EISA), and a 330-megabyte hard disk.

The Vectra 486's primary market will be file servers and CAD environments. However, for this first review, we focused the Vectra's performance using our standalone workstation CPU-intensive and disk-intensive throughput tests. In an upcoming file server product comparison, we will test at the Vectra's capabilities as a server. The CPU test measures the speed of a computer's CPU and memory architecture running common business applications. We time how long the computer takes to process files in Autodesk Autocad 10; Lotus 1-2-3, Release 2.2; Lotus 1-2-3, Release 3.0; and Word Perfect 5.0.

The disk-intensive test measures how long it takes to modify data in Drase III Plus, Drase IV, and Paradox 3.5. Modifying files in these applications requires more work from the hard disk than the CPU. (For more details on how we test our PC and score 80486 products, see "Real Applications in Real 486 Computers" in our 80486 product comparison of March 1990, Page 57.)

Although the Vectra 486 has no external RAM cache (like the Intel 80486 chip has 8MB of internal RAM cache), its overall performance is above average. We computed our CPU test in 12 minutes and 11 seconds—7 percent slower than the fastest 486 system we've reviewed (the ALR Powercache 8-603)—another EISA machine, and slightly above the mean for the group.

The Vectra 486 proved surprisingly fast running our disk-intensive test. It took just 28 minutes and seven seconds—three minutes, nine seconds faster than the BlackBox 86/25, our previous disk-intensive throughput leader. The Vectra has exceptional hardware and software compatibility. It can handle software on disk drives not normally supported by most systems.

"The HP Vectra has exceptional hardware and software compatibility."

Changing the ROM address on our IBM Token Ring network adapter, we did not find any hardware compatibility problems. The Vectra 486 has an unusual combination of expandability features. Instead of a single system board, the Vectra has separate, removable CPU and RAM memory cards attached to a backplane. Several computer manufacturers use similar designs to give systems an upgrade path. According to Hewlett-Packard, the Vectra 486 has removable CPU and memory cards for easier servicing. The Vectra's backplane also has eight 32-bit EISA slots, each of which can also work as an 8- or 16-bit ISA slot. The CPU card contains the latest 80486 chip and the system ROMs plug into a massive, proprietary 38-pin connector.

25-MHz 486Computers
(last times in minutes-seconds)

<table>
<thead>
<tr>
<th>Company</th>
<th>HP Vectra 486</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed</td>
<td></td>
</tr>
<tr>
<td>CPU-intensive</td>
<td></td>
</tr>
<tr>
<td>Anteced, Release 10</td>
<td>2:02:11</td>
</tr>
<tr>
<td>Drase III Plus 1.1</td>
<td>1:25:56</td>
</tr>
<tr>
<td>Drase IV 1.0</td>
<td>0:07:15</td>
</tr>
<tr>
<td>Lotus 1-2-3, Release 2.2</td>
<td>0:33:56</td>
</tr>
<tr>
<td>Lotus 1-2-3, Release 3.0</td>
<td>0:43:43</td>
</tr>
<tr>
<td>Paradox 3/386</td>
<td></td>
</tr>
<tr>
<td>Word Perfect 5.0</td>
<td></td>
</tr>
</tbody>
</table>

Another EISA machine, and slightly above the mean for the group.

The Vectra 486 proved surprisingly fast running our disk-intensive test. It took just 28 minutes and seven seconds—three minutes, nine seconds faster than the BlackBox 86/25, our previous disk-intensive throughput leader. The Vectra has exceptional hardware and software compatibility. It can handle software on disk drives not normally supported by most systems.

"The HP Vectra has exceptional hardware and software compatibility."

Changing the ROM address on our IBM Token Ring network adapter, we did not find any hardware compatibility problems. The Vectra 486 has an unusual combination of expandability features. Instead of a single system board, the Vectra has separate, removable CPU and RAM memory cards attached to a backplane. Several computer manufacturers use similar designs to give systems an upgrade path. According to Hewlett-Packard, the Vectra 486 has removable CPU and memory cards for easier servicing. The Vectra's backplane also has eight 32-bit EISA slots, each of which can also work as an 8- or 16-bit ISA slot. The CPU card contains the latest 80486 chip and the system ROMs plug into a massive, proprietary 38-pin connector.