

# REVIEWS

Since 1979, the classic version of Wordstar — not Wordstar 2000 but the original Wordstar — has faithfully served a large and devoted following of micro computer word processing users. This office/professional product, now known as Wordstar Professional, continues to be hallmarked by its cryptic but remarkably easy-to-use control-key commands for editing and most specialized features. Wordstar fell on hard times a few years ago as snazzier word processors with function-key interfaces, pull-down menus, and enhanced features pushed it out of the word processing limelight.

For many years, Wordstar International (formerly Micropro) focused attention on the behemoth known as Wordstar 2000, hoping it would defeat Multimate, Word Perfect, and Microsoft Word. Meanwhile, the company let the classic version of Wordstar languish without a major update or improvement. In 1988, though, the release of Wordstar Professional 5.0 inched the product into contention as a heavy-duty word processor. As Wordstar 2000 fades, Wordstar Professional 5.5 has picked up many of its enhancements to be more competitive in this rapidly changing and cutthroat market.

## FEATURES:

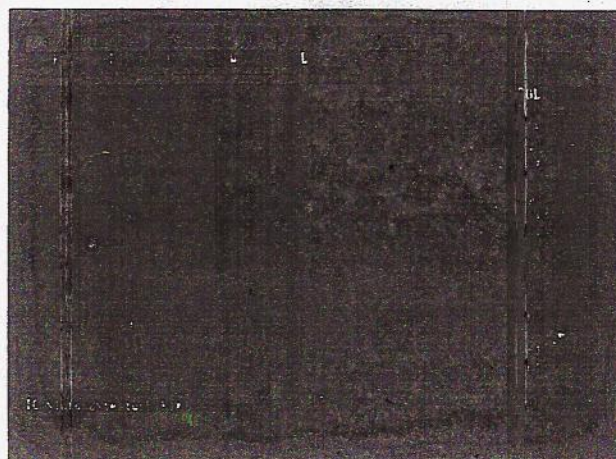
Wordstar 5.5 continues a company tradition of enhancement by attachment. While keeping the basic word processing engine much the same, the program grows through the addition of stand-alone modules that bring new features to the user without a major rewrite of the underlying program.

Originally, Wordstar had a mail-merge program for handling mailing lists; then came a spelling checker, a thesaurus, and mail-list file manager. Now Wordstar has included a telecommunication program, a graphics program, an outliner, and a file-conversion utility. Many of these add-ins are the same products featured in Wordstar 2000 Plus. Each of the products is partially integrated into the Wordstar operating environment and matches features available in competitive products, although the Swiss-army-knife characteristic of this collection of utilities makes their use somewhat clumsy and idiosyncratic.

One of Wordstar's most attractive features has always been its orientation toward the touch-typist. The control-key management of cursor movement and practically all other functions let touch-typists operate at top speed without removing their fingers from the home keys.

However, the touch-typing approach has gradually lost ground to the mania for mice, drop-down menus, and myriad function keys. Consequently, Wordstar 5.0 and 5.5 have pull-down menus accessed by Alt-key combinations or a mouse. Not to ignore the traditionalists, however, everything can still be done with Ctrl-key combinations.

New to this update is a paragraph style function that attaches a group of characteristics such as fonts, margins, justification, and line heights to a paragraph and all subsequent paragraphs until the next



Wordstar Professional 5.5's Layout menu lets you set columns, number pages, access the page preview, and invoke headers and footers.

## Wordstar 5.5: Grand Old Man Gets a New Hat and Cane

*This update of a classic adds enhancements while maintaining its traditional user interface.*

BY JOHN LOMBARDI CONTRIBUTING EDITOR

style code is inserted. These styles can be saved by name and attached as a group, a concept pioneered by Microsoft Word and adopted by many office/professional systems. Wordstar's implementation of this feature in the update eliminates a conspicuous defect in the previous version.

Wordstar 5.0's biggest claim to fame was its page preview, the best in the business, capable of showing text in a wide array of formats from magnified sections of a page, single pages, facing pages, and multiple pages per screen. The preview puts a grid on the screen to permit accurate depiction of text placement on the page. This feature remains, and Version 5.5 now shows landscape pages as well as graphic elements that can be inserted into a Wordstar document. Graphics inclusion, one of Wordstar 5.0's competitive disadvantages, has been partially remedied by including the Inset graphics program.

The word processing file-conversion

program, another add-on, works well and exceeds similar utilities included with such products as Microsoft Word or Word Perfect. Another utility program, Profinder, provides a file manager and DOS shell with a set of utilities for creating menus and a file-management system that lists, sorts, views, moves, copies, deletes, and otherwise handles file-management chores. It also has a utility that allows you to capture screen blocks from a viewed file into a Wordstar file.

Wordstar's telecommunication module has been optimized for use with BBSes such as Compuserve and includes the Xmodem and Xmodem-crc file-transfer protocols with several terminal emulations. The telecommunications script language for automatic log-on, file transfer, and log-off is adequate for the task. PC-Outline, a competent outliner from Brown Bag Software, is minimally integrated into Wordstar and uses a significantly different command syntax.

In features, Wordstar 5.5 does well in comparison with the competition, although there are plenty of features it still lacks, such as support for multiple indexes and lists, revision marking (although there is strikethrough capability), editable side-by-side columns on-screen, footnotes in multiple-column text (only endnotes allowed), headers or footers longer than three lines, sorting other than line sorts, tables of authorities, and sophisticated graphics integration.

The classic Wordstar word processing engine works smoothly and has been enhanced significantly, but many added features integrate poorly with the main program and require separate manuals, installations, and command logic.

## PERFORMANCE:

Wordstar 5.5 general editing capabilities are equal to the competition in many areas, and touch-typists will love the control-key editing. However, the need to use dot commands for a variety of formatting options rather than on-screen functions inhibits some functions. For example, you cannot block a section of text and center it. While you can edit two copies of the same file, the versions are actually different and the one you save last becomes the current file. On the other hand, redefinable tabs and date stamping are supported, and you can window and edit multiple files. We rate basic editing very good.

Wordstar 5.5 has better-than-average layout capabilities, although it does not show multiple columns side-by-side on the screen. It does automatically set up columns, sport true widow/orphan control, and include column balancing and automatic leading, and the page preview is effective as described above. Unlike Microsoft Word or even Word Perfect, however, Wordstar does not allow you to modify the way the display will look. In Word, for example, you can show the text either with line lengths easy to see on-screen or with line lengths wrapped as they will appear when printed; Wordstar 5.5 only shows the lines wrapped as printed. Also, Wordstar 5.5's display of formatting commands is less effective than the reveal codes window system used in Word Perfect. Formatting is very good.

Font support in Wordstar 5.5 includes soft fonts of various types and a complete and comprehensive printer driver list and font-width table modification program. Font changes are easy, and the page preview is made more precise by including screen fonts derived from the printer fonts. However, the font selection system in Wordstar allows you to select more soft fonts than a Laserjet, for example, and can hold and will create a download soft font batch file that can overload the printer. We rate font support very good.

Style sheets, a new feature in this revision, are not as extensive as those in Microsoft Word. But Wordstar's paragraph styles are a great improvement on the simple embedded ruler lines of previous versions and let you store named styles. We rate style sheets good.

Wordstar 5.5's spelling checker and thesaurus have more features than Word Perfect and are even an improvement on Wordstar 2000, Release 3. Not only is the

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dictionary and thesaurus capable, but the correction algorithm offers great suggestions. The dictionary has 100,000 words, there is an unlimited customizable dictionary, and the thesaurus includes 220,000 synonyms. The program supports user dictionaries, foreign language dictionaries (at extra cost), and maintains capitalization. The thesaurus has parts of speech and cross-referencing. Spelling checking and thesaurus features are excellent.

The mail-merge program, one of the first add-ons to Wordstar Professional, offers features for preparing form letters, selecting records, and reformatting text as letters are merged. You can sort lists, and the companion mail-list program provides a useful fixed-form, flat-file database. We rate mail merging good.

The features included in Brown Bag's PC-Outline add-in outliner are extensive. However, with a substantially different command syntax, PC-Outline's integration with the rest of the program is less effective than it should be. Still, you can expand and collapse levels and perform standard electronic outliner capabilities. We rate outlining good.

Table of contents and indexing include the additional benefit of indexing against an exclusion file. Multiple levels are supported, as is simple cross-referencing. However, there are no separate lists for tables or figures. We rate table of contents and indexing good.

Footnoting support includes both endnotes and footnotes in the same document. In addition, the program allows on-screen numbering and annotations marked with any mark you want, rather than just a number. However, the program does not support the elaborate cross-referencing available in Word Perfect, for example, which supports floating text references to tables or other materials. We rate footnoting very good.

Macros, called shorthand macros in Wordstar, provide basic keystroke capturing with text and commands that can be stored in a file and reused. Although an acceptable implementation, the Wordstar macro cannot double as a word processing programming language for complex tasks requiring "IF-THEN" constructs or variables, as is possible in Word or Word Perfect. We rate macros very good.

Graphics through Inset, an add-on

memory-resident program, provides reasonable graphics integration. While Inset is very powerful with many features, it only handles .PIX files created by using Inset to capture a screen. It does not import any of the standard file types, limiting its utility in integrating the output of many graphics-compatible programs.

You can crop, scale, and rotate images, and Inset lets you draw lines and supports fill patterns.

While the program handles such things as signature files, Wordstar 5.5 attaches a graphic image with a special nonprinting tag line inserted in the text and doesn't automatically make space for the image. If you don't leave enough white space in the text by entering blank lines, the imported graphic will print on top of the text. The page preview shows exactly where the text and graphics will fall, but placement and rearrangement of graphic and text must be adjusted manually. And without major manual adjustment, Wordstar will not flow text around a graphic image that doesn't take up the whole page. Consequently, while the attachment of Inset to Wordstar 5.5 partially remedies the absence of graphics capability in the earlier version, it is not competitive with the market in flexibility or ease of use. Inset has much to offer as a stand-alone graphics screen-capture utility, but it does not match either Word Perfect or Word in graphics integration. Still, Inset offers a variety of useful graphics features, and we rate graphics very good.

Printer support for Wordstar 5.5 is strong, although in the basic package you only receive three Postscript font families and you need some special files from Adobe (for free) to support more fonts. Wordstar handles a wide range of printers and it has a good printer-modification program for custom adjustment. We rate printer support very good.

Compatibility is provided by Star Exchange, an add-on file translation utility that works well, translating between all standard formats such as ASCII, DCA/RFT, Word Perfect, Microsoft Word, Multimate Advantage, and others. Some features, such as paragraph styles, will not convert from Wordstar 5.5 backward into Wordstar 5.0. In addition to its file-conversion capabilities, Word-

star imports Dbase files as well as Lotus 1-2-3 and compatible worksheets without conversion, using either entire sheets or named ranges. We rate compatibility very good.

In speed, Wordstar performed admirably. While not up to the level of Word and certainly not as fast as Xywrite, Wordstar is still fast enough to warrant a good score.

#### DOCUMENTATION:

Wordstar 5.5 has a variety of documentation covering topics such as keyboard templates, installation, customization, printers, and monitors. A large main manual is distributed either perfect-bound or as a three-ring binder at a slightly higher cost. There is also a pocket Wordstar booklet with command summaries and other handy information. There is a comprehensive on-screen tutorial and a separate set of lessons.

Unfortunately, the new paragraph styles feature isn't documented in the main manual, although the menus, the pocket manual, a new features booklet, and the Readme file mention it.

Overall, the manuals and booklets are clear and well-presented. The index is good and the sections on each of the separate modules are complete and include sufficient examples and illustrations. Error messages are clear, on-line help reasonably complete, and the menu system clear and effective, whether using the classic menus or the pull-down style.

We rate Wordstar Professional's documentation very good.

#### EASE OF LEARNING:

Over the years the installation system for Wordstar International products has improved from clumsy to sophisticated. Wordstar 5.5 has a fine set of auto-install procedures that effortlessly move the program from distribution disks to a hard disk. Moreover, errors or misunderstandings in the installation process can easily be recovered, and you can reinstall or change the installation setup easily. Font selection in printer installation is easy and printer setup is as good as you'll find.

You can install Wordstar and begin producing simple documents within an hour or so. However, learning the auxiliary modules — such as telecommunica-

tion and the outliner — greatly augment the ease of learning time line. Given the good installation and tutorials, balanced by the varying syntax of the add-on modules, we rate ease of learning good.

program for individual use. Wordstar has always been a malleable program, and the Wschange program makes much of this flexibility accessible to regular users.

Some ease of use is diminished by the need to master the different keystrokes common to PC-Outline or the telecommunications module. It is something of a nuisance to find that familiar keystrokes

## REPORT CARD INFO WORLD

### WORD PROCESSING SOFTWARE

#### Wordstar Professional

VERSION 5.5

Criterion	(Weighting)	Score
<b>Performance</b>		
Basic editing	(50)	Very Good
Formatting	(25)	Very Good
Fonts	(20)	Very Good
Style sheets	(20)	Good
Spelling checker/thesaurus	(50)	Excellent
Mail merge	(25)	Good
Outlining	(20)	Good
TOC & indexing	(20)	Good
Footnotes	(20)	Very Good
Macros	(25)	Very Good
Graphics	(30)	Very Good
Printer support	(30)	Very Good
Compatibility	(40)	Very Good
Speed	(50)	Good
<b>Documentation</b>		
Ease of learning	(100)	Good
Ease of use	(200)	Good
Error handling	(75)	Very Good
<b>Support</b>		
Support policies	(25)	Very Good
Technical support	(25)	Unacceptable
<b>Value</b>		
Value	(50)	Very Good
<b>Final score</b>		<b>6.8</b>

#### PRODUCT SUMMARY

Company: Wordstar International, 33 San Pablo Ave., San Rafael, CA 94903; (800) 227-5609.

List Price: \$495.

Requires: IBM PC or compatible; MS-DOS 2.0 or later; 384K of RAM; two floppy drives (hard disk recommended, especially for page preview and effective use of the add-on modules); graphics card and 512K of RAM for preview.

Pros: Strong editing tools; fine mail merge; useful telecommunications and outlining functions; nice graphics screen-capture program; superb page preview; easy to use; great for touch-typists.

Cons: Numerous independent modules rather than one integrated product; result is inconsistent user interface among modules; limited headers and footers; limited graphics integration; overloaded technical support.

Summary: Keyboard-intensive, relatively powerful, and blessed with a superb page preview, Wordstar 5.5 has a host of features and a number of less well-integrated add-on modules for telecommunications, file conversion, outlining, and graphics. An excellent writing tool but somewhat less effective for complex documents.

#### BENCHMARKS

#### Office/Professional Word Processors

	Wordstar Version 5.5	Wordstar Version 5.0	Microsoft Word Version 5.0	Microsoft Word Version 4.0	Word Perfect Version 5.0
<b>File</b>					
Load	<1	1	1	1	2
Save & continue	7	7	2	4	4
Import ASCII	32 <sup>1</sup>	2	2	1	Vanes <sup>2</sup>
Export ASCII	<1	22	2	55	8
Import DCA/RFT	53	N/A <sup>3</sup>	1:01	59	20
<b>Cursor movement</b>					
Top to bottom	4	3	1	<1	2
Manual scroll	1:04	1:02	31	94	45
Reformat	32	32	12	11	20 <sup>4</sup>
<b>Search</b>					
Last word	5	4	2	2	2
Global replace	17	11	10	14	6
Append document	3	3	2	<1	1

All times in seconds, unless otherwise noted (1:00 is one minute).

<sup>1</sup>Wordstar combines two timings: opening the file and reformatting text.

<sup>2</sup>Word Perfect's Import ASCII score varied from eight to 15 seconds.

<sup>3</sup>Wordstar 5.0 does not import DCA/RFT files.

<sup>4</sup>Could not globally alter rulers/style sheets in Word Perfect. Score indicates the time required to alter each ruler/style sheet individually.

## INFO WORLD

#### EASE OF USE:

With an investment of several hours, you'll gain a reasonable level of competence. Once learned, however, Wordstar's basic word processing engine is remarkably easy to use, especially for touch-typists. Further, Wordstar includes a superior customization program that allows you to set a wide range of operational characteristics that optimize the



from Wordstar do completely unrelated things in the outliner. The patchwork nature of the user interfaces of each of these modules, plus the lack of automatic white space for the graphics inclusion, reduce our prior ease-of-use rating from very good to good.

#### ERROR HANDLING:

Wordstar always edits a copy of your saved file — never the original file on disk. When Wordstar saves a file it always creates a backup. Wordstar supports timed backups, but only for PCs with BIOSes dated later than November 1985. PC-Outline does have an automatic backup, however.

Wordstar requires confirmation before abandoning a changed file. There is a single-level Unerase command as well. We rate error handling very good.

#### SUPPORT:

For 90 days, Wordstar International warrants that the product will do what the manual says it will. If you find an error that the company can't fix, you can get your money back. There is toll-free technical support, a Compuserve special-interest group, and extended corporate support. The package comes with a discounted subscription to Compuserve and a Bitstream coupon for soft-font installation. We rate support policies very good.

In 14 attempts to reach technical support at various times over two days, we received nothing but busy signals. Past calls to this company's support line during less busy periods have produced clear, competent answers to our questions. As an alternative, the Compuserve forum provides good response from other users and occasionally from Wordstar personnel. However, in spite of the Compuserve forum, we must judge technical support unacceptable based on our inability to get through.

#### VALUE:

At \$495, Wordstar 5.5 is well within the price range of office/professional word processing packages such as Word Perfect and Microsoft Word. It is less powerful than those packages as a word processing workhorse, but it includes a highly capable outliner and a telecommunications module not available in either of the market leaders. Further, some users will prefer the Wordstar user interface over the menus, speed keys, mouse, and function keys of Microsoft Word, Word Perfect, and others. We rate Wordstar 5.5 a very good value. □

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

#### RELATED REVIEWS

Office/Professional Word Processors

Microsoft Word 5.0, June 19

Product Comparison: Office/Professional Word Processing, January 23:

Displaywrite 4

Lotus Manuscript

Microsoft Word (4.0)

Multimate Advantage

Nota Bene

Office Writer

PC Write

Samna Word IV

Sprint

Total Word

Word Perfect

Wordstar Professional 5.0

Wordstar 2000 Plus

Xywrite III Plus

## PC Link 386-33 Is Extremely Fast, Powerful DOS System

With its excellent expandability, compatibility, it offers an affordable system and a good value.

BY ANDREW KUTVILA  
INFOWORLD TEST CENTER

**P**C Link Corp. makes an entry into the new world of super-fast machines with its version of a 33-MHz 386 system. Don't be fooled by its ordinary-looking case: Caged inside is another mighty number-crunching animal.

#### FEATURES:

The PC Link 386-33 employs a 33-MHz CPU on a Hauppauge 386 motherboard, supports both the 80387 and Weitek 3167 math coprocessors, and comes standard with 4 megabytes of 80-nanosecond RAM on the system board. It offers 64K of 20-nanosecond static RAM cache memory, controlled by an 82385-33 cache controller. The machine comes with MS-DOS 4.01 or 3.3, system utilities, and I/O utilities. The vendor offers a choice of OS/2 or Xenix, available separately.

#### PERFORMANCE:

Our system arrived with 70-nanosecond RAM instead of the advertised 80, and 15-nanosecond cache RAM instead of 20. The vendor said it had simple run out. This means our CPU results will be better than yours, but by an amount so small as not to affect our scoring. In our 48-hour benchmark test, the PC Link 386 registered 8.7 in CPU speed, which places it as runner-up to the Tangent 33-MHz machine — the faster machine of the few 33-MHz machines we've tested to date. The PC Link machine's speed is well in front of the 25-MHz systems. We rate CPU speed excellent.

While CPU indexes for these 33-MHz speed demons have jumped 25 percent and more over the previous generation of 25-MHz machines, hard drive performance isn't as inclined to break records. Still, with the ever-larger drives being shipped with these systems (reflecting their suitability as network file servers), the hard drive indexes are all at the top of

one minute and 17 seconds, and our Paradox 386 test in 55 seconds — each score is somewhat faster than the scores of the fastest 25-MHz units. The Lotus recalc took 55 seconds, about the same as the 25-MHz units, and a Dbase III Plus test took nine minutes and six seconds, again somewhat faster than the typical 25-MHz systems though slower than our top scorer, the 25-MHz Dell 325, which finished the task in six minutes and 25 seconds.

The PC Link had no problems running our software and hardware compatibility suites. The vendor claims OS/2 compatibility but did not provide a copy. The system earns very good in software and excellent in hardware compatibility. For increased compatibility, the system can also be run at 8 MHz using a provided memory-resident utility. The vendor will also provide upon request a free front-panel control that will switch the speed to 12 MHz; we recommend you ask for this option, since we didn't find the memory-resident utility convenient to use.

For expandability, PC Link offers a pretty typical package for a high-end system. Six 16-bit slots and one 8-bit general-purpose slot as well as one 32-bit slot dedicated to memory expansion are provided. The system comes with 3 standard half-height mass-storage mounting positions and two additional half-height (or one full-height) mounting positions without external access; all are in the 5¼-inch form factor. One serial port and one parallel port come standard. The 4 megabytes of RAM are expandable to 64 megabytes via the 32-bit memory card. It has a keylock that electronically disables the keyboard. The PC Link rates excellent in expandability.

#### DOCUMENTATION:

We received a preliminary copy of the PC Link system manual and found that it needs some work. Basic software configuration is covered well but the rest of the manual describes only assorted features of the standard configuration. The only drawing we found was a map of the Hauppauge motherboard. The manual is clearly designed for the user who will have the system configured by the vendor; thus it is missing information on jumpers and expansion. Troubleshooting is covered along with some extra technical information. On balance, we rate the documentation satisfactory.

#### SETUP:

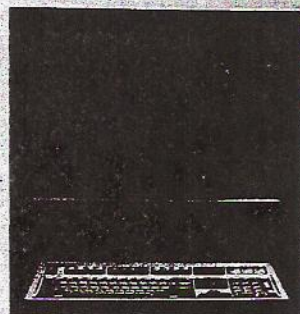
The PC Link machine has a standard desktop case, which made it easy to take out of the box, position it, and power up. This procedure should not take more than 20 minutes for anyone. We rate ease of setup good.

#### EASE OF USE:

The PC Link has a very basic, IBM AT-look-alike case, with the addition of a front control panel with keylock, reset buttons, and signal lights. There is nothing remarkable about the ease of use; we rate it satisfactory.

#### SERVICEABILITY:

The PC Link has a clean motherboard fitted with a Chips & Technologies chip



The basic PC Link 386-33 includes 4 megabytes of system RAM, 64K of static RAM cache, a 150-megabyte hard disk, and a 1.2-megabyte disk drive.

set. The majority of the logic components are socketed. As with other very early 33-MHz 386 systems we've reviewed to date, this one has a few chips labeled with stickers rather than with engraved numbers; this suggests these chips are not yet

**"C**PU indexes for the 33-MHz speed demons have jumped 25 percent over the previous generation of 25-MHz machines."

in mass production. (Systems showing up at our door in the past week or two are now sporting engraved chips.) We found a few jumpers and no DIP switch boxes. There were no last-minute fixes.

The PC Link system has a very loud 1.2-megabyte floppy disk drive that got everyone's attention when it cranked up. The system didn't boot properly on the first power-up because, we discovered, one of the three batteries that keeps CMOS alive had fallen out of its bracket, presumably during shipping. This small problem didn't affect the rating. We rate PC Link's workmanship good.

PC Link offers a one-year warranty and a 30-day limited money-back guarantee. If you need technical support, the vendor provides a toll-free number and a staff to help you from 9 a.m. to 6 p.m. Eastern time. Support policies rate very good.

The PC Link system has not been shipping in quantity yet, so we could not conceal our identity as InfoWorld while making calls to PC Link's technical support staff. All of our questions were answered politely. We give the company's technical support a default rating of satisfactory.

#### VALUE:

The base price of the PC Link is \$5,995, and that includes 4 megabytes of system RAM, 64K of static RAM cache, a 150-megabyte hard disk and a 1.2-megabyte disk drive both controlled by the ESDI 1:1 interleaved controller, one serial port, one parallel port, a 16-bit VGA card without the monitor, a 101-key AT-style keyboard, and MS-DOS 4.01 or 3.3.

The system configured for our tests lists for \$7,229 and added an 80387 math

**"T**he PC Link has a standard desktop case, which made it easy to take out of the box, position it, and power up."

the field. PC Link earned indexes of 4.4 in sequential hard disk access and 4.6 in random hard disk access on its 150-megabyte Miniscribe with its 1:1 interleaved ESDI controller, for an excellent score in both categories (the vendor is now shipping 159-megabyte Micropolis drives).

In the unscored throughput tests, PC Link performed our Autocad redraw in 22 seconds, our Word Perfect preview in