Presented at the Round Table: What Shall We Do About the Headings in the Periodic Table? 3rd Chemical Congress of North America and the 195th National Meeting of the American Chemical Society, Toronto, Canada, June 9, 1988.

Secrist, J. A., III. Book review of *Organic Chemistry: The Name Game*; Nickon, Alex; Silversmith, Ernest F.; Pergamon: Elmsford, NY, 1987; 347 pp. *J. Am. Chem. Soc.* **1988**, *110*, 7936.

Smith, P. A. S. Humor and Substance in Organic Nomenclature. Book review of *Organic Chemistry: The Name Game*; Nickon, Alex; Silversmith, Ernest F.; Pergamon: Elmsford, NY, 1987; 347 pp. *Chem. Eng. News* **1988**, *66*(17), 26–27.

Zaye, D. F. Book review of *How to Find Chemical Information*, 2nd ed.; Maizell, R. E.; Wiley-Interscience: New York, 1987. *J. Chem. Inf. Comput. Sci.* **1988**, *28*(1), 40.

INTERVIEWS AND QUOTES

D. H. Busch and K. L. Loening were interviewed and quoted in How to Set a Periodic Table, Is There a Way Out of Elemental Confusion? Shekhar Hattangadi. *Ind. Chem.* **1988**, *9*(5), 20–23.

K. L. Loening was interviewed and quoted in Terminologie: Watch Your Language. Hans Buskes. *Chem. Weekbl.* **1988**, April 28, 90.

An independent opinion of J. H. Stocker was quoted on the back cover of the book *Organic Chemistry: The Name Game. Modern Coined Terms and Their Origins*; Nickon, Alex; Silversmith, E. F.; Pergamon: Elmsford, NY, 1987; 347 pp.

COMPUTER SOFTWARE REVIEWS

WordPerfect for the Macintosh†

MARY ACOCK
USDA/ARS/NRI Systems Research Laboratory, BARC-West, Beltsville, Maryland 20705

Received August 31, 1988

The mechanics of preparing and editing journal articles, book chapters, and books has become increasingly easier as more sophisticated word-processing packages have become available. The recent introduction of WordPerfect for the Macintosh, used in conjunction with graphics software and a laser printer, could turn any writer into a publisher of professional-looking books and newsletters.

WordPerfect version 1.0.1 is loaded with features. It has so many that a two-tier pull-down menu is required to display them all, and they occupy 1110K of disk space. The basic WordPerfect software requires 315K, and it is accompanied by WP Thesaurus (354K), WP File Formats (43K), WP Help (92K), Speller Utility (22K), and Dictionary (284K).

As a veteran user of MacWrite (version 4.6, which only requires 78K of disk space), I was interested to know whether WordPerfect would be any easier to use. The screen for a new document in WordPerfect looks only slightly different from the screen in MacWrite. Page and line numbers are referenced in the lower left corner of the screen instead of the page number appearing in the vertical scroll bar. The ruler in WordPerfect, although preset, does not automatically appear at the top of the document as it does in MacWrite. The bottom of the screen in WordPerfect has a quick access bar for changing style or for sub- or superscripting. The style can also be changed by using the second tier of the Font pull-down menu.

WordPerfect has the same 22 fonts, 6 basic styles plus subscript and superscript, and 6 letter sizes that MacWrite has. Superscripts and subscripts are created in a slightly different way in WordPerfect, and there is opportunity to select the size and position desired. A MacWrite text containing subscripts or superscripts is interrupted by extra half-lines within the paragraph to accommodate them. With WordPerfect, these half-lines are not necessary, and without them, better looking copy is produced.

Some of the features in WordPerfect not available in MacWrite are macro, merges, show codes, timed backup, file management, append, mark text, retrieve, and columns.

The macro function can be used to program a series of keystrokes or mouse movements. This feature adds versatility to WordPerfect, allowing one to tailor it to individual requirements. For example, subscript and superscript have no keystroke option in WordPerfect. These functions are used often in my writing, and I found mousing my way to superscript or subscript each time, even with the quick access bar, became tedious. When I created my own keystroke option command using macro, my problem was solved.

The merge command can be used to combine such things as address lists and form letters and can be chained with macros to minimize the number of operations needed to create an end product. These features are likely to be underused for scientific writing, but they are very simple to put into operation if needed.

The show codes feature is essential for software as complex as WordPerfect. A document can become loaded with "invisible" codes, and sometimes in editing a manuscript, a hidden code can produce some unexpected results. Show codes allows one to "see" the normally invisible codes and delete unwanted ones.

The retrieve feature on WordPerfect allows one to copy a whole document into another one painlessly, without having to close the original document, open the document to be copied,

† WordPerfect for the Macintosh. Version 1.0, April 26, 1988. Version 1.0.1, Aug 1, 1988. WordPerfect Corp., Macintosh Product Support, 288 W. Center Street, Orem, UT 84057. Telephone (801) 225-5000; telex 820618; FAX (801) 227-4288. WordPerfect retails for $395. MacWrite, version 5.0 with spell checker, retails for $125.

select all of it, copy it, open the original document, and paste into it. In the same way, append makes transferring pieces of information from several sources easier because it allows one to add text either to the end of an existing file or to the end of the clipboard.

Being able to keep several windows (documents) open simultaneously in WordPerfect is convenient. In WordPerfect I divide my manuscript into separate documents while I edit and then retrieve them when I have finished. My reference list is opened as a separate document while I write my paper. That way I can add or delete a reference from my paper and my reference list without having to scroll back and forth through a single document. I keep better track of any changes this way.

The automatic backup feature on WordPerfect, which saves one's creative work at regular intervals, is a nice touch. MacWrite (version 4.6) does not have this insurance, and I have been caught out more than once with unexpected power outages.

WordPerfect is ideal for book writing. The spell, thesaurus, and mark text features of WordPerfect along with the two headers and footers that can be placed on every page or every odd or every even page show that WordPerfect was created with this purpose in mind. The mark text command allows one to mark words and then use them to generate a list, table of contents, or an index. The ability to format a document into several columns is another useful feature, especially for producing a newspaper or newsletter.

When files need to be reordered or cleaned up or a "lost" document must be found, the file management feature is there to help. With file management files can be retrieved, copied, or printed. One can delete, rename, look into, or display information about a file or folder or display all the files that contain a specified word.

The manual that comes with WordPerfect is well laid out and well written. It is difficult to describe everything a novice needs to know to use WordPerfect to its full potential, but the manual does a very good job.

I like having all the extra features in WordPerfect even if I rarely need them for my work. However, in my opinion, WordPerfect is not an "outwrite" winner over MacWrite. MacWrite is better than WordPerfect when it comes to pasting graphs into a document. With MacWrite, one can scroll through the graph, much as one scrolls through the text of a document. Using WordPerfect version 1.0, I had difficulty in seeing the graph on the screen if the graph occupied one whole page. With WordPerfect version 1.0.1, viewing the graph on the screen is much less of a problem than with version 1.0 but still not as good as with MacWrite.

The indent (wordwrap) feature on WordPerfect is not as versatile as wordwrap in MacWrite. In reference lists where the second and subsequent lines are often indented, I have never been able to do this as easily with WordPerfect as with MacWrite.

In WordPerfect, the ruler is more awkward to use than in MacWrite. The WordPerfect ruler always appears at the top of the page, but it is the ruler for the line the cursor is on. Each line can have a different ruler setting, but one can only observe the ruler setting for a particular line of text by placing the cursor on that line. In MacWrite the ruler always appears in the text above the section of text it controls, so it is easy to see where changes in format occur. The ruler in WordPerfect is unobtrusive and tabs are more easily set, but the ruler on MacWrite is easier to understand and it is much easier to determine where changes in the ruler setting have been made.

WordPerfect is available for a variety of computers and is compatible among them. I transferred a file created by WordPerfect for the Macintosh version 1.0.1 to an IBM-AT. The text transferred accurately, but the wordwrap for each line had to be corrected and changes in style in the original text were lost in the exchange.

Being able to transfer files (or documents) between computers is useful for a lab like ours with Macintosh, IBM, and VAX computers. One can start a document on one type of computer and finish it on another, and if a professional-looking printout is needed, WordPerfect files can always be transferred to the computer with the best printer.

I recommend WordPerfect version 1.0.1 as a powerful, user-friendly word-processing package. The number of features in MacWrite (version 4.6) is modest compared with WordPerfect, but then, so is the price.

ASYST 2.1

KENNETH L. RATZLAFF†

Instrumentation Design Laboratory, The University of Kansas, Lawrence, Kansas 66045-0046

Received December 12, 1988

ASYST, in a nutshell, is a *scientific software development environment* based on the FORTH programming language, but greatly extended to meet the needs of the laboratory scientist. This review will attempt to describe ASYST, compare it with other methods of software development, and discuss performance and applicability for scientific problems.

FORTH-type languages are not familiar to most scientists, and consequently a summary of this class of languages is in order. In FORTH, software commands (or *words*) are equivalent to the procedures and subroutines of other languages, but very important differences exist. First, when a single word is defined and entered into the computer, the text is not retained, but it is immediately compiled and becomes a resident part of the system. At any time thereafter when the ASYST prompt allows command entry, that word can be executed just as would be any interactive command that is part of the native language. Successive new words may be defined, using old words (defined by ASYST or by the programmer) as building blocks, until entire programs are written as a single word. This has the powerful advantage of keeping many compiled procedures available for immediate execution at any time.

To string together these words, FORTH-type languages use a Stack (similar to but not the same as the CPU stack) onto which parameters are placed and accessed via Reverse-Polish notation (RPN). Consequently, the style of programming is substantially different from those to which scientists are customarily exposed; because code does not read linearly,

† BITNET: RATZLAFF@UKANVM.