

## Typesetting on Personal Computers

### Writer's Tools I: PC Spelling and Grammar Checkers

Alan Hoenig and Mitchell Pfeffer

In my pre- $\text{\TeX}$  days, I was “heavy” into spelling and grammar checkers. They were such convenient shortcuts that it was like getting something for nothing. These programs were tailored to suit my word processor, and I had to give them up when I replaced that word processor with  $\text{\TeX}$ . None of them had any problem accepting my  $\text{\TeX}$  source files—ASCII was usually easier for them than the special-format word processing files—but they usually stumbled over  $\text{\TeX}$ 's embedded commands. Since then, these programs have become much more robust. It's appropriate to take a look at them to see how helpful they might be today.

#### Spelling Checkers

Spelling checkers offer the fewest problems for use with  $\text{\TeX}$ , and almost any decent one is worth your while. It's notoriously difficult to proofread your own work anywhere near accurately. All spell checkers let you build up auxiliary dictionaries for the  $\text{\TeX}$  commands in your documents. I looked for speed and the absence of idiosyncratic behavior in the presence of  $\text{\TeX}$ . One particularly annoying problem is the inability of some of them to use digits to delimit a word. Thus, “`vskip1pt`”, “`vskip2p`”, “`vskip3p`”, and so on are all distinct words to these spell checkers. You can't, therefore, add “`vskip`” to an auxiliary dictionary. (This problem won't apply to all the Goody-Two-Shoes who conscientiously add proper spacing to separate their commands from their qualifiers.)

I tried several programs for this column, and two are worth commenting on. *Webster's New World Spelling Checker* was fast, but it suffered from the embedded digit syndrome I mentioned above. Its dictionary contains 110,000 words, and it will catch repeated words. Apart from the embedded digit problem, it was also difficult to run *NWS* across subdirectory boundaries. That is, if a file is in directory `\articles` and the software is in `\spell`, I could not invoke the program from the `\articles` subdirectory. This is a bit of a bother. The brightly-bound user manual is quite adequate; you'll have no problem getting

this program up and running. (*Webster's New World Spelling Checker*, Simon & Schuster Software, 1230 Avenue of the Americas, New York City 10020; \$59.95)

Altogether more satisfactory is the top-rated *MicroSpell* from Trigram Systems, even though its dictionary contains a ‘mere’ 80,000 words. It works like lightning, and I can run it from my document subdirectory. I can configure it to treat digits as word boundaries, so I can add “`vskip`” and so on to my auxiliary dictionary. It also will catch repeated words and do simple capitalization and punctuation checking. It's particularly good at guessing at what I really meant in instances when I really mangle a spelling. You'll have no problem with the manual, or with installing and using it. A winner. (*MicroSpell*, Trigram Systems, 5840 Northumberland Street, Pittsburgh, PA 15217; (412) 422-8976; \$69.95)

I was unable to locate any spelling checker that treats the backslash as a letter. Therefore, while all could catch my “`hobx-es`” and my “`medksips`”, none could tell me when I forgot the leading backslash.

#### Grammar Checkers.

Grammar checkers are more problematical. Are they ever any good? It's doubtful they can make you a great writer, or even a good writer, but their suggestions will prevent you from committing most major solecisms. They are particularly good at catching the passive voice syndrome (“it is to be hoped...”) which infects so much technical writing. Since  $\text{\TeX}$ 's commands fit into no syntax scheme, grammar checkers usually stumble badly over  $\text{\TeX}$  source. The problem is acute in those programs which provide on-line analyses of your writing. You can't tell them to bypass command sequences, about which they persist in complaining. It takes forever to analyze a file in these circumstances.

If used conscientiously, grammar checkers put themselves out of business. After awhile, one becomes adept at avoiding the errors grammar checkers pick up.

The best for use with  $\text{\TeX}$  is *RightWriter*. It creates a separate file for its analysis. Although this contains a record of every unmatched delimiter (it won't look to the next line) and of every `halign` table (which is a long, complex sentence to it), at least you can zip past these messages and concentrate on matters of substance, like the passive voice, padded and redundant phrases, and archaic or technical usage. As a bonus, the program “grades” you by assigning numerical values to the readability, strength, degree of description, and

usage of jargon of your document. Yuppie writers will enjoy competing against themselves! Finally, when you've finished ignoring or implementing its comments, you run your file through the program to strip out its comments. *RightWriter* is easy to set up and use. (*RightWriter*; *RightSoft, Inc.*, 2033 Wood Street, Ste. 218, Sarasota, FL 33577, (813) 952-9211; \$95)

In non-typesetting situations, reviewers award first place to *Grammatik II*, and it's easy to see why. Its developers gave it slick packaging and included well-written manuals. Not only does it do its job well, but it is almost endlessly configurable. You can tell it which error types to ignore, and you can revise its rule dictionaries so *Grammatik* will search documents for your own idiosyncratic mistakes. You can instruct it to run silently and include its error reports within your file, but it lacks one essential capability for  $\TeX$  users: the ability to strip these messages out when you're finished with them. (It's easy enough to create a Pascal filter to excise them because these inclusions all have a standard format. You may decide *Grammatik's* extra functionality is worth this extra effort.) One of Reference Software's personnel told me that they have scheduled the release of a major upgrade, *Grammatik III*, for mid-spring. (*Grammatik II*; *Reference Software*, 330 Townsend St., Ste. 131, San Francisco, CA 94107 (800) 872-9933; \$89.00)

A program called *Readability* is not quite a grammar checker, but not quite *not* one either. Originally developed in Sweden (of all places), it performs extensive statistical analyses on your prose, informing you (in sophisticated displays) how many long sentences you have, how many long words you use, how many runs of long words you have, and so forth. The program generates some overall comments on your document, and allows you to redo these analyses assuming your document fits into several different categories, such as novel, juvenile book, newspaper article, bureaucratic gobbledegook, and others. *Readability* won't catch the passive voice or repeated words, which is why it isn't a grammar checker. This program displays its non-English origins in some amusing typographical errors in its (otherwise excellent) manuals and screen displays.

My impression is that the quality of one's writing will soar should an author conscientiously use the results of *Readability* to re-work the document, particularly if you use it in conjunction with a program like *RightWriter*. The key word in that sentence is *conscientiously*. A lot of work is involved, and most of the people I know who

put pen to paper (or the electronic equivalent) are wanting in that trait. (*Readability*; *Scandinavian PC Systems*, 3 Brookside Park, Old Greenwich, CT 06870, (203) 698-0823; \$59.95)

In a forthcoming *TUGboat*, we'll cover additional writer's tools.

### Grapevine Reports of Inexpensive Versions of $\TeX$

Alan Hoenig and Mitch Pfeffer

The  $\TeX$  community may be interested in two product announcements we received à propos of cheap versions of  $\TeX$  available for PC-based systems. We have not yet verified any of the claims of these announcements, but we hope to report on them in greater detail in an upcoming issue.

**Gary Beihl** (cad.beihl@MCC.COM; postal address is MCC, 3500 West Balcones Center Cr., Austin, TX 78759; 512-353-0978) has recently completed a port of  $\TeX$ 2.7 to MSDOS using Datalight's C compiler. 'Dos $\TeX$ ' has passed the TRIP test and may be freely distributed provided that all copies are complete and unmodified, and that no fee may be charged for redistribution. Your system will need 640K memory and 4.5MB hard disk space. A modified version of Nelson Beebe's Epson .dvi driver is included. Output is 420h×216v dpi. Dos $\TeX$  compiled the *TeXbook* at about 15 sec/page on a 6Mhz, 1 wait state, AT clone. The package contains a fairly complete texinputs directory, and a reasonable subset of the grand ensemble of CM fonts. Dos $\TeX$  comes to you complete on seven 360K floppy diskettes plus installation instructions minus any warranty or support, although Gary will attempt to fix bugs in a timely fashion. Dos $\TeX$  is priced at US\$75 (US\$85 foreign), and a check or money order payable to *Electronetics* should be mailed to *Electronetics, Inc.*, c/o Gary Beihl, 119 Jackrabbit Run, Round Rock, TX 78664.

**Richard Kinch** has also ported  $\TeX$  to the C language, and dubbed the result 'Turbo- $\TeX$ .' Pricing for the Turbo- $\TeX$  software and documentation range from \$99 for the IBM-PC compatible version to \$2000 for a VAX version. The price for a source-code kit for the IBM PC, including the Turbo- $\TeX$  C source code and the Microsoft C compiler 5.0, is \$650. Complimentary demonstration copies of Turbo- $\TeX$  for PCompatibles, AT&T Unix