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*****  
*           RGB^TechWriter           *  
*                                     *  
*   Scientific Text Processor   *  
*                                     *  
*           Version 2.23           *  
*****
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Installation and User's Guide

August 1989

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You are encouraged to distribute unaltered copies of this program and its associated files. If you would like to receive the most up-to-date version of the program and a laser-printed copy of the User's Guide, send your check for \$20 with your return address to BA^EL Software, 13016 Bear Dancer Trail, Albuquerque, NM 87112.

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RGB^TechWriter

1. INTRODUCTION

What is the "RGB^TechWriter Scientific Text Processor?"

RGB^TechWriter is a personal computer word processor specifically designed to make technical typing involving complex symbolic expressions fast, easy, and accurate. RGB^TechWriter works best with 80-column (RGB-type) color displays.

How does RGB^TechWriter handle equations better?

Equations involve characters with special attributes. Some characters need to be superscripted, some subscripted, and some represent Greek or other special symbols not found on the typewriter keyboard. RGB^TechWriter handles this problem by using the color of the character as it appears on the screen to convey the additional information. This insures that an exact correspondence is maintained between columns on the screen and on the printed page. This makes it easy to, for example, line up the numerator and denominator of a complicated expression. Other word processors require that this information be provided in the form of additional control characters which are inserted into the text. These control characters take up space on the screen but not on the page, making alignment nearly impossible. Some other word processors use graphics mode to paint the special characters on the screen as they will appear on the page. This is a nice feature, but very slow. By using color instead, RGB^TechWriter makes editing much faster.

How does RGB^TechWriter compare for normal text?

All of the screen and text-memory manipulations performed by RGB^TechWriter are written directly in assembler language for the fastest possible operation. You can page through a document at the rate of 5 screen pages per second on a standard PC (10 per second on the PC/AT or PS/2!). Text entry is fast enough to allow paragraph reformatting to be done automatically after every keystroke and still keep up with typing in excess of 120 words per minute. Many of the features found in office word processors are available, including page numbering, headers and footers, search and replace, line centering, horizontal scrolling for lines up to 255 characters, bold printing, underlining, right-justification, and the ability to move blocks of text. In addition, RGB^TechWriter offers fractional line spacing, page-break control, and the ability to create files in either RGB^TechWriter format or standard (ASCII) format. If you are a programmer, you will find that RGB^TechWriter is a good editor for writing source code in structured languages like Pascal.

RGB^TechWriter

How else does RGB^TechWriter support technical typing?

RGB^TechWriter provides sophisticated treatment for figures and tables you may wish to include in your text. You can type a table (or figure) immediately after the paragraph in which it is first referenced. When you print the document, the table will be inserted at that point if there is room for the entire table to fit on the current page. If there isn't enough room, the table is temporarily skipped and the current page is filled out with the text that comes after the table. The table is then printed at the top of the following page.

Will RGB^TechWriter work with my printer?

RGB^TechWriter was originally written out of frustration over the inability of existing word processors to take full advantage of special printer capabilities. All of RGB^TechWriter's printer command codes are contained in a separate data file. Data files are provided on the distribution diskette for several common printers. If your printer is not listed, you can create your own data file using any ASCII text editor (including RGB^TechWriter), provided you understand your printer's control codes, and your printer supports continuously-variable vertical line spacing (vertical motion index). The data file also contains "alternate character definitions" that allow you to translate special characters (which appear in color on the screen) into a string of as many as 80 bytes (characters) to be sent to the printer.

RGB^TechWriter can't be everything to everyone, can it?

RGB^TechWriter does have some limitations. Individual files are limited to 62,768 characters, about 20 pages of single-spaced text. Longer documents can usually be broken into several sections, each in a separate file. Some features found elsewhere but not currently implemented in RGB^TechWriter include automatic footnoting, index generation, file linking, double columns, mail merge, and proportionally-spaced fonts. RGB^TechWriter does not come equipped with a built-in spelling checker, but it works well with Borland's Turbo Lightning, for which installation instructions are provided.

How can I be sure that RGB^TechWriter won't bomb out on me?

No program is entirely free of bugs, but before RGB^TechWriter was released to the public, it was used on a regular basis by several dozen people for over a year without discovering any bugs that could cause text to disappear. During this proof period, six graduate theses in science and engineering and several journal publications full of equations were composed entirely using RGB^TechWriter.

RGB^TechWriter

What if I have files created using another word processor?

RGB^TechWriter can both read and create files having the standard DOS ASCII format. Unfortunately, the ASCII standard does not allow for special character attributes like Greek, boldface, superscripts, subscripts, or underlining. ASCII files also have a "hard" carriage return at the end of every line, not just at the end of paragraphs. Nevertheless, if your former word processor can create ASCII files (most do), then you have a way to transfer all of that text into RGB^TechWriter. Once you have read the ASCII file, you can remove the extra carriage returns, add special character attributes, and save it as an RGB^TechWriter file.

Is RGB^TechWriter easy to learn?

Yes! This is one of the program's strong points. Of course it helps if you have been exposed to computer word processing before, but even first-timers can become proficient after only a few hours of practice. All of RGB^TechWriter's functions are summarized in on-screen menus that can be called up with a single keystroke. After your first session, you probably won't even need to refer to the documentation until you want to try something fancy.

RGB^TechWriter

RECENT UPDATE INFORMATION

The essential elements of each update following Version 2.12 are summarized here so that if you have been using an earlier version of RGB^TechWriter, you will know what changes to expect. These changes have already been incorporated in the documentation.

2/87 Version 2.13

Text length is now tested to prevent an entry of 0. The CTRL-F7 function now moves the cursor to the last line in the equation instead of the first. A minor adjustment to the right-justification routine was made to improve micro-justification. Some of the alternate character definitions at the end of the file OKI192.IBM were corrected.

8/87 Version 2.14

A period at the start of a line followed by a numeral is no longer treated as a dot command. The stall and delay factors now represent time delays measured in milliseconds. File names no longer include a drive specifier.

9/87 Version 2.15

Function Shift-F8 now searches for repeated words.

10/87 Version 2.16

Memory allocation was updated to work properly with DOS 3.3.

11/87 Version 2.17

Fixed bugs in the repeated-word function and memory allocation.

2/89 Version 2.18

Text editing of underlined regions retains the underline.

3/89 Version 2.19

A new print feature facilitates double-sided printing. Equation numbers are no longer underlined.

3/89 Version 2.20

A bug that affected the ^P function was fixed.

5/89 Version 2.21

Fixed a bug affecting only the very first character in the file.

6/89 Version 2.22

Fixed bugs involving line breaks at hyphens, zero spacing in tables, tables more than a page long, and residual highlighted characters after block move/delete.

8/89 Version 2.23

Fixed a bug causing failure to print text on rare occasions.

