

A User-Friendly Multi-Function T_EX Interface Based on Multi-Edit

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Abstract

The aim of this paper is to describe the set of Multi-Edit macros created for easily processing of T_EX files. Note that the standard version of Multi-Edit has some tools to work with T_EX files, but these tools are not very convenient. Therefore we have created our own set of macros, which allows us to process the whole file or to compile and view any selected block of text, such as complicated formulas, for example. Also, there are additional tools for handling some standard situations.

On-Screen Compile Menu

The **Compile menu** is activated by pressing the corresponding key. This menu includes:

1. Compiling for formats: Plain-T_EX, $\mathcal{A}\mathcal{M}\mathcal{S}$ -T_EX, L^AT_EX or $\mathcal{A}\mathcal{M}\mathcal{S}$ -L^AT_EX. One can also use various compilers, for example, 286-compiler and big-compiler. These menu items are realized by calls of corresponding batch-files. Automatic processing can be used to find compile errors;
2. Variants of a view. In particular, one can use a view with manual input of options;
3. Variants of printing, similar to the view ones. Various output devices can be used, such as dot matrix and laser printers;
4. Additional menu items; for example, one can include a call of Russian spell-checker.

It is easily to add, to modify or to delete menu items by using standard Multi-Edit tools.

Automatic error handling

Errors identified during compiling are handled in the following way:

- The cursor is positioned at the location of the first error found;
- The corresponding error message appears in the upper line of the window;
- The log-file displayed in the OUTPUT window points to the corresponding error message, which shows only the first two lines. If this is insufficient, then the cursor in the OUTPUT window can be moved by pressing (F11) or (Alt+Esc). In this case the OUTPUT window will increase up to seven lines. To move the cursor in the text window, press (F11) or (Alt+Esc) again and the OUTPUT window will decrease up to two lines.

To find the next compile error, simply press the (NxtErr) key.

Block Compile

To compile and view a portion of a text (for example, a complicated formula), select the fragment and use a special macro, invoked by pressing the corresponding combination of keys. Various T_EX formats (Plain-T_EX, $\mathcal{A}\mathcal{M}\mathcal{S}$ -T_EX, L^AT_EX or $\mathcal{A}\mathcal{M}\mathcal{S}$ -L^AT_EX) may be used also. The selected block may contain user-defined T_EX macros. These macros should be placed on the beginning of the file and the line

```
%%% End of Leading Block
```

after them. How many of the signs % is not important. All definitions found above this line will be added into the selected block when it is compiled. If this line is absent, no macros and definitions will be added. If additional definitions are placed in the another file and then included via either `\input` or `\documentstyle`, etc., these commands also should be placed above the percented line just mentioned. If one needs to omit some commands, then the corresponding lines should be marked

```
%%% Skip line
```

For example, the typical beginning of a L^AT_EX file may be marked as follows:

```
\documentstyle[12pt,fleqn,draft]{article}
\newcommand\smb1{\rm smb1}
\newcommand\al{\alpha}
\input footline.tex %%% Skip line
\begin{document}
%%% End of Leading Block
```

After the file has been compiled, the logfile containing the selected block and error messages appears in the OUTPUT window.

Additional macros

Additional possibilities can be divided into two types: macros that are useful for all T_EX users and those useful for Russian T_EX users only.

For all T_EX users.

1. A database can be used to insert some T_EX commands and macros. This database contains a set of commonly used macros for Plain-T_EX, $\mathcal{A}\mathcal{M}\mathcal{S}$ -T_EX and L^AT_EX. Commands may be inserted on the cursor place or so as to surround a selected block.
2. Users can locate opening and closing parentheses or curly brackets, as well as check for any missing opening or closing brackets.

For Russian T_EX users.

1. For those whose English-language skills need assistance, there is a special database containing more than five hundreds basic sentences often used when writing English mathematical papers. The idea is adapted from Sosinsky. A part of this book is included in the HELP system to explain how to use the database.
2. Should the Russian T_EX user forget to swich the keyboard layout, the file can still be processed without re-typing the text in the proper register.
3. Capitalization of a word, line or block can be changed to either upper- or lowercase. This macro works independently of the alphabet in use (Russian or English).

Conclusion

Most of these abilities can also be added to Multi-Edit for Windows. Thus we offer the T_EX user a friendly multi-function Windows interface.

References

Sosinsky, A. *How to Write a Mathematical Paper in English*.