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Typesetting of Tables and Lists and Other New Features in T_EXonWeb

Sazba tabulek, seznamů a další novinky v T_EXonWeb

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Abstract: This article describes new features in T_EXonWeb. T_EXonWeb is a web application that allows us to use T_EX/L^AT_EX typesetting system without needing its installation on a local computer. One of the most important characteristics of this application is to help beginners to start working with T_EX/L^AT_EX. It offers them a lot of tools such as table and list wizards to ease their first steps.

Keywords: T_EXonWeb, T_EX/L^AT_EX

Abstrakt: Tento článek popisuje nové vlastnosti systému T_EXonWeb. Jedná se o webovou aplikaci, která umožňuje využívat typografický systém T_EX/L^AT_EX bez nutnosti instalace na lokální počítač. Jeden z nejdůležitějších rysů této aplikace je zaměření na pomoc začátečnickům pracujícím s T_EX/L^AT_EX. Nabízí jim mnoho nástrojů pro usnadnění prvních kroků, jako například návrhář tabulek a seznamů.

Klíčová slova: T_EXonWeb, T_EX/L^AT_EX

Introduction

As we mentioned in [1], one of the main aims of T_EXonWeb application is to provide a simple interface for document processing using the typographic system T_EX/L^AT_EX. Many users would like to produce high-quality documents but are not familiar with the non-trivial T_EX/L^AT_EX installation and configuration. Now T_EXonWeb could offer them more than just a simple text editor. Beginning users often fail in making more complicated parts of their documents. Our experience shows us users have lot of problems with typesetting tables, lists or including graphics into their documents. This was the reason why we decided to implement wizards with a simple interface helping beginners to produce T_EX/L^AT_EX code of these more complicated document parts.

Tables

$\text{T}_{\text{E}}\text{X}$ onWeb application offers beginners a toolbar for interactive insertion of $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ commands. For example any user could easily select a text part with his/her mouse and click the button to change the text style to italics or bold font and the editor inserts the right $\text{T}_{\text{E}}\text{X}/\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ command. But there are also more complicated parts in documents. One of them could be the table. Inserting the source code of it could not be done by just one mouse click. This is the time for source code wizards.

Table Wizard in $\text{T}_{\text{E}}\text{X}$ onWeb is based on $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ `tabular` environment and consists of two windows. In the first one, the user specifies the table size — number of rows and columns. In the second window appearing after the size specification, there is a table designing area similar to the style in which users design tables in text processors or spreadsheet applications. In this area the user can fill a text or numbers to cells just by clicking into them. The size of the table specified in the previous window is not unchangeable. The user can add new or delete unused rows or columns by clicking plus (+) symbol in the table designer header or clicking icons in *Edit & Alignment* section. This section is available after selecting the whole row or column by its header. Values in cells could be aligned by selecting the whole column and specifying the style (left, center, right, justify).

Another important attribute of tables are their borders. The user can set the border style just for the cell, for the column, row or for the whole table (clicking the button in the upper left table header). There is a set of icons illustrating available border styles. Border line styles could be set to none, single or double.

Cell merging is also available. First it is necessary to select one cell. Then holding Shift key and moving cursors the user can select more cells. After it clicking the icon in *Edit* section merges cells together. *Table Wizard* does it by `multicolumn` and `multirow`¹ macros.

The table could be placed into $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ floating environment `table` by checking the box *Table environment* and filling its properties (position and title).

The table source code could be sometimes quite complicated. Therefore users have the possibility to view it by *Preview* button before inserting it to their own documents. Button *Insert* places the source code to the document and *Close* button closes the table wizard. We recommend not to close the wizard before ensuring the table looks like we want to. The window is not modal, which means, the user could insert the table code and if not satisfied he could delete it in his document and continue designing the table. When the wizard window is closed it is not possible to continue designing in the table wizard. The user should continue just in editor or start again.

¹provided by `multirow` package

Lists of items

Another document part making beginners problems is the list of items. The T_EXonWeb offers *List Wizard* helping users to design ordered, unordered or combined multilevel lists.

First it is necessary to specify the style (ordered/unordered) for the highest list level. First item of the list is visible thus the user can type a text there. The next item appears after clicking the icon with plus (+) symbol or just pressing Enter key. Deleting of the item is also simple, just click the red cross icon.

If there are more list items, the user can modify their order in the list by up/down arrows. This means to move the second item to the first position etc.

Left/right arrows modify the item level in the list. The user can move selected item to the lower level clicking the right arrow or move the item to the upper level clicking the left arrow. Each list level could have a different style (ordered/unordered).

Preview button shows the source code before inserting it to the document, *Insert* button places the source code to the document and *Close* button closes the *List Wizard*. There is a similar limitation as we discussed in the tables section. This means after closing the window it is not possible to continue designing the list in wizard.

Graphics

Because T_EXonWeb is a web application running on a distant server, users must upload graphics to their accounts there to see them in documents. Sometimes it makes problems to beginners and also setting properties of a picture could be complicated. This process is simplified by *Insert Picture wizard*.

The user first distinguishes if he wants to place already uploaded picture to his document or include a picture from his local computer. If he selects to *Upload*, there appears an upload form where he can find the picture within his computer. After selecting *Existing* there appears a list of pictures already uploaded to his account. Then the user can specify if to place the picture to L^AT_EX floating environment **figure** and define its position and title.

Properties section enables to specify the width, height and rotation angle of graphics. *Insert* button places the source code to the document and if necessary uploads the picture to the user account on the server.

Other tools

Besides these wizards mentioned above there are few other things helping beginners to create high-quality documents in T_EX/L^AT_EX. The first one is a set of

predefined document templates. There is e. g. a template for a curriculum vitae or letter. The set is still being extended with new templates.

The last very useful tool is *Spell Checker*. This is based on `aspell` application and enables the user to build his own dictionary to avoid highlighting special words. Spell checker highlights misspelled words in the text with yellow color and the active word with red color. It also displays a window with the list of alternatives for the misspelled word where the user can find the right word and replace it with button *Replace*. If the word is right but not in the dictionary the user can add it using button *Add*. He could also ignore the word or skip to the next/previous word. The selection of misspelled words is also possible by mouse. Just click the highlighted word.

Conclusion

TeXonWeb is not intended as a full substitution of specialized TeX/L^AT_EX editors installed on local computers. Web page could not offer such comfort in writing documents. But in some situations it could be useful, especially for beginners who want to try how TeX works and are not familiar with all L^AT_EX macros.

TeXonWeb is still being developed and new functions and options are added quite often. Now we work on a multilingual support, document templates, editor improvements and hard on a file manager to offer more user friendly management such as copying, renaming and uploading files or work with directories.

You can try TeXonWeb at the url <http://tex.mendelu.cz/en>.

References

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