

L^AT_EX News

Issue 37, June 2023 — DRAFT version for upcoming release

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Introduction

New or improved commands

Providing copy and show functions for environments
 To copy a command definition we have introduced `\NewCommandCopy` in 2022. This even allows you to copy commands that consist of several internal components, such as robust commands or those with a complex signature. To do the same with environments, e.g., to define the environment `myitemize` to be equivalent to `itemize`, you can now write

```
\NewEnvironmentCopy{myitemize}{itemize}
```

There are also `\Renew...` and `\Declare...`, which may be useful depending on the circumstances.

In addition, we offer a `\ShowEnvironment` command, which displays the `\begin` and `\end` code of the environment passed as an argument. E.g., `\ShowEnvironment{center}` results in the following output:

```
> \begin{center}=environment:
> ->\trivlist \centering \item \relax .
<recently read> }
```

```
1. ... \ShowEnvironment{center}
> \end{center}:
> ->\endtrivlist .
<recently read> }
1. ... \ShowEnvironment{center}
```

(github issue 963)

Code improvements

doc: Index _ correctly to write

(github issue 943)

doc: Support the upquote package

The default quote and backquote characters in typewriter fonts are typographical quotes, e.g., the input

```
\verb*/'prog 'my input'/'
```

is rendered as `'prog_my_input'` and not as ``prog_my_input'`` as preferred by many programmers.

This can be adjusted, for example, with the `upquote` package, which results in the second output. However, for historical reasons `doc` had its own definition of `\verb` and `verbatim` and as a consequence the two packages did not cooperate. This has now been fixed and loading `upquote` together with `doc` has the desired effect.

(github issue 953)

New key for filecontents

The `filecontents` environment warns on the terminal if a file gets overwritten even if that is intentional, e.g., when you write a temporary file over and over again. To make the warning less noisy in this case we added a new `nowarn` key that redirects the overwriting warning to the transcript file. We think that some record of the action is still required to help with debugging, thus it is not completely silenced. The warning that nothing gets written, because the file already exists (and the `force` key was not used), is not altered and still shows up on the terminal.

(github issue 958)

A further hook for shipping out pages

Since October 2020 the `shipout` process offers a number of hooks to adjust what is happening before, during, and after the `\shipout`. For example, with the `shipout/before` hook, packages can reset code they have altered (e.g., `\catcodes` during `verbatim`-like processing) and with `shipout/background` and `shipout/foreground` material can be added to the pages. Details are given in [1]. However, what was

missing was a hook that allows a package writer to manipulate the completed page (with foreground and background attached) just before the actual shipout happens.

For this we now provide the additional hook `shipout`. One use case (sometimes needed in print production) is to mirror the whole page via `\reflectbox` including all the extra data that may have been added into the fore- or background. *(github issue 920)*

Displaying release information in the .log

L^AT_EX displays its release information at the very beginning of the L^AT_EX run on the terminal and also writes it to the transcript file if that is already opened at this point. While this is normally true, it is not the case if the L^AT_EX run was started passing additional T_EX code on the command line, e.g.,

```
pdflatex '\PassOptionsToClass{11pt}{article}
          \input{myarticle}'
```

In this case the release information is displayed when `\PassOptionsToClass` is processed but the transcript file is only opened when the output file name is known, i.e., after `\input` has been seen, and as a result the release information is only shown on the terminal.

To account for this scenario, we now repeat the release information also at the very end of the transcript file where we can be sure that it is open and ready to receive material. *(github issue 944)*

Bug fixes

Incompatibility between doc and unicode-math

The `unicode-math` package alters the catcode of `|` but does not adjust its value for use in `doc`, with the result that “or” module, i.e., $\langle A|B \rangle$ are displayed in a strange way. This is now fixed with some firstaid code that will eventually be moved into `unicode-math`. *(github issue 820)*

A fix for \hspace

The change to `\hspace`, done in 2020 to make it `calc` aware, had the unfortunate side effect that starting a paragraph with `\hspace` would result in the execution of `\everypar` inside a group (i.e., any local changes would immediately be revoked, breaking, for example, `wrapfig` in that special situation). This got fixed with the 2022-11 PL1 hotfix, so was already corrected in the previous release, but only now documented in a newsletter. *(github issue 967)*

Changes to packages in the amsmath category

Changes to packages in the graphics category

Changes to packages in the tools category

References

- [1] Frank Mittelbach, L^AT_EX Project Team: *The ltshipout documentation*.
Run `texdoc ltshipout-doc` to view.