LaTeX News

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ISO 8601 Date format

Since before the first releases of LaTeX 2$_\varepsilon$, LaTeX has used a date format in the form YYYY/MM/DD. This has many advantages over more conventional formats, as it is easy to sort and avoids the unfortunate ambiguity between different communities as to whether 01/02/2017 is the 1st of February or 2nd of January.

However there is another date format, formalised by the International Standard ISO 8601. The basic format defined by this standard is functionally equivalent to the LaTeX format, but using `-` rather than `/`. This date format is now supported in many Operating Systems and applications (for example the `date --iso-8601` command in Linux and similar systems).

From this release, LaTeX will accept ISO format date strings in the date argument of `\ProvidesPackage`, `\usepackage`, etc. Currently we recommend that you do not use this format in any packages that need to work with older LaTeX releases; the latexrelease package may be used with older releases to add this functionality. This change is handled in a special way by latexrelease: The package always adds support for ISO dates whatever format date is requested; this is required so that the necessary date comparisons may be made.

The new functionality can be seen in the startup banner which advertises `LaTeX2e <2017-04-15>`.

Further TU encoding improvements

The 2017/01/01 release saw the introduction of the new TU encoding for specifying Unicode fonts with LuaTeX and XeTeX. There were a number of small corrections and additions in the patch releases updating 2017/01/01, and a further addition in this release, notably extended support for the dot-under accent, `\d`.

Disabling hyphenation

The existing LaTeX code for `\verb` and `verbatim` had some issues when used with fonts that were not loaded with hyphenation disabled via setting `\hyphenchar` to −1. In this release these verbatim environments use a `\language` setting, `\l@nohyphenation`, that has no hyphenation patterns associated.

The format ensures that a language has been allocated with this name. For most users this will in fact be no change as the standard babel language has for a long time allocated a language with this name.

In order that page breaks in `verbatim` do not influence the language used in the page head and foot, the format now normalises the language used in the output routine to a default language as described below.

Discretionary hyphenation

The LaTeX definition of `\-` has been adjusted so that it will insert the current font's `\hyphenchar`, as would the TeX primitive. A comment in `source2e` has given this new definition since the first releases of LaTeX 2$_\varepsilon$, and in this release we finally acted upon this comment. Previously `\-` always inserted a `-` at a break point even if a different character would be used for automatic hyphenation with the current font.

Default document language

A new integer parameter `\document@default@language` is introduced; this is initialised to −1 but is set at `\begin{document}` to the language in force at that time if it has not been set by preamble code. This is very similar to the handling of the default color, and is used in a similar way to normalise the settings for page head and foot as described above. Users should not normally need to set this explicitly but it is expected that language packages such as babel may set this if the default behaviour is not suitable.

Line spacing in parboxes

Inside a `\parbox` LaTeX normalises the baseline spacing. However it has not previously reset `\lineskiplimit`. This meant that lines of a paragraph that have ascenders or descenders could be set with *closer* line spacing than lines without. This can easily happen if you use a `\parbox` in an AMS alignment, as they use a relatively large value of `\lineskiplimit`. As usual, the latexrelease package may be used to force the older behavior.

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