

The **latex-lab-text** package

Changes and additions to the kernel related to the tagging of various small text commands

L^AT_EX Project^{*}

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Abstract

1 Introduction

This module contains small changes to improve the tagging of (inline) text commands.

While the tagging of the L^AT_EX logo is quite straightforward, tagging of `\emph` as **EM** can have unwanted side-effect as both tags are inline tags and so not every inner structure is allowed. Probably both commands will need an optional argument or a starred variant which suppress the tagging.

2 Implementation

```
1 <*package>
2 <@@=tag>

3 \ProvidesExplPackage {latex-lab-testphase-text} {\ltlabtextdate} {\ltlabtextversion}
4 {Code related to the tagging of various small text commands}
```

2.1 The L^AT_EX and T_EX logo

This uses the generic hooks, so that it catches also other definitions. For `\LaTeX` we stop tagging to avoid that the inner `\TeX` leads to a double tagging.

```
5 \AddToHook{cmd/LaTeX/before}
6 {
7   \mode_leave_vertical:
8   \UseTaggingSocket{inline/begin}
9   {tag=\UseStructureName{span},actualtext=LaTeX,phoneme=['la:tɛx]}
10  \tag_suspend:n{\LaTeX}
11 }
12 \AddToHook{cmd/LaTeX/after}
13 {
14   \tag_resume:n{\LaTeX}
15   \UseTaggingSocket{inline/end}
```

^{*}Initial implementation done by Ulrike Fischer

```

16 }
17 \AddToHook{cmd/TeX/before}
18 {
19   \mode_leave_vertical:
20   \UseTaggingSocket{inline/begin}
21     {tag=\UseStructureName{span},actualtext=TeX}
22 }
23 \AddToHook{cmd/TeX/after}
24 {
25   \UseTaggingSocket{inline/end}
26 }

```

2.2 Emphasizing

We tag `\emph` but leave commands like `\textbf` alone, as it is not clear if they always have a semantic meaning.

```

27 \AddToHook{cmd/emph/before}
28 {
29   \mode_leave_vertical:
30   \UseTaggingSocket{inline/begin}
31     {tag=\UseStructureName{text/emph}}
32 }
33
34 \AddToHook{cmd/emph/after}
35 {
36   \UseTaggingSocket{inline/end}
37 }

```

2.3 `\textsuperscript` and `\textsubscript`

```

38 \sys_if_engine_luatex:TF
39 {
40   \cs_new:Npn \__tag_space_ignore:n #1 {\tag_spacechar_off:#1\tag_spacechar_on:}
41 }
42 {
43   \cs_set_eq:NN \__tag_space_ignore:n \use:n
44 }
45 \protected\def\@textsuperscript#1%
46 {%
47   \check@mathfonts
48   \leavevmode
49   \begingroup
50   \UseTaggingSocket{inline/begin}{tag=\UseStructureName{span},attribute-class=sup}
51   \sbox\z@{\fontsize\sf@size\sf@size#1}%
52   \raise\dimexpr\textsuperscript@offset\relax\box\z@
53   \UseTaggingSocket{inline/end}
54   \__tag_space_ignore:n{\textsuperscript@space}
55   \endgroup
56 }
57 \protected\def\@textsubscript#1%
58 {%
59   \check@mathfonts
60   \leavevmode

```

```

61 \begingroup
62 \UseTaggingSocket{inline/begin}{tag=\UseStructureName{span},attribute-class=sub}
63 \sbox\z@{\fontsize\sf@size\sf@size#1}%
64 \lower\dimexpr\textsubscript@offset\relax\box\z@
65 \UseTaggingSocket{inline/end}
66 \__tag_space_ignore:n{\textsuperscript@space}
67 \endgroup
68 }

```

2.4 \mbox

When used in math and when `luamml` is active `\mbox` has to be correctly annotated. For this we add a socket that `luamml` can activate. We test for the socket until 2025-06-01.

```

69 \DeclareRobustCommand\mbox[1]
70 {
71   \leavevmode
72   \tag_socket_use:nnn {math/luamml/hbox}
73   {}{ \hbox{#1} }
74 }

```

And the same for `\makebox`

```

75 \long\def\@imakebox[#1][#2]#3{%
76   \tag_socket_use:nnn {math/luamml/hbox}{ }
77   {
78     \@begin@tempboxa\hbox{#3}%
79     \setlength\@tempdima{#1}%      support calc
80     \hb@xt@\@tempdima{%
81       \expandafter\ifx\csname bm@#2\endcsname\relax
82       \bm@c
83       \@latex@warning{Unexpected~alignment~#2}%
84     \else
85       \csname bm@#2\endcsname
86     \fi}%
87     \@end@tempboxa
88   }}

```

2.5 phantom commands

In text mode we do not want the content of a phantom command to create a structure, so we suspend tagging TODO: consider if it makes sense to set `measuring` to true instead. `\mathsm@sh` is redefined in `latex-lab-math`.

`\makeph@nt`

```

89 \def\makeph@nt#1{%
90   \setbox\z@\hbox
91   {\SuspendTagging{\makeph@nt}%
92    \color@begingroup#1\color@endgroup\ResumeTagging{\makeph@nt}}\finph@nt}

```

(End of definition for `\makeph@nt`.)

`\@kernel@mathph@nt`

`\mathph@nt`

```

93 \def\@kernel@mathph@nt#1#2{%
94   \setbox\z@\hbox{\SuspendTagging{\mathph@nt}$\m@th#1{#2}$\ResumeTagging{\mathph@nt}}\finph@nt}

```

```

95 \def\mathph@nt#1#2
96 {
97   \setbox \z@ = \hbox {
98     $
99     \m@th
100    #1
101    {
102 % nested phantoms should not be processed by luamml
103     \let\mathph@nt\@kernel@mathph@nt
104     #2
105   }
106   \UseTaggingSocket{math/luamml/save/nNn}{\mathphant} #1 {\mphantom}}
107   $
108 }
109 \UseTaggingSocket{math/luamml/finph@nt}{\finph@nt}
110 }

```

(End of definition for \@kernel@mathph@nt and \mathph@nt.)

2.6 The \verb command

```

111 \def\verb{\relax\ifmmode\hbox\else\leavevmode\null\fi
112   \bgroup
113   \UseTaggingSocket{inline/begin}{tag=\UseStructureName{text/verb}}%
114   \verb@eol@error \let\do\@makeoother \dospecials
115   \verbatim@font\@noligs
116   \language\l@nohyphenation
117   \@ifstar\@sverb\@verb}
118 \def\verb@egroup{\global\let\verb@balance@group\@empty\UseTaggingSocket{inline/end}\egroup}

```

2.7 The \rule command

Rules supplied as ornaments in the chapter designs and many other places should be tagged as artifacts. The is what the following code takes care of. It could be either done with Artifact SE's or with MCs that are artifacted (current version) — using MCs has the advantage that the PDF readers have less work to do, using SE the advantage that one can see the artifact in the structure tree. Not sure what is better. For now I provided two plugs so that one can switch.

```

119 \NewStructureName{text/rule}
120 \AssignStructureRole{text/rule}{Artifact}

121 \NewTaggingSocket{rule}{2}

122 \NewTaggingSocketPlug{rule}{artifact-MC}{
123   \tag_mc_end_push:
124   \tag_mc_begin:n{artifact}
125   #2
126   \tag_mc_end:
127   \tag_mc_begin_pop:n{}}
128 }

129 \NewTaggingSocketPlug{rule}{artifact-SE}{
130   \UseTaggingSocket{inline/begin}
131   {tag=\UseStructureName{text/rule}}

```

```

132     #2
133     \UseTaggingSocket{inline/end}
134 }

135 \AssignTaggingSocketPlug{rule}{artifact-MC}

```

`\@rule`

L^AT_EX's `\rule` command should also generate rules that are artifacted by default. This doesn't belong here, but before moving into `latex-lab-text.dtx` it may need some further adjustments and a decision on whether to use Artifact SEs or MCs.

```

136 \protected\def\@rule[#1]#2#3{%
137     \leavevmode

```

Don't tag if the rule is known to be invisible.

```

138     \ifdim #2=\z@
139         \hbox{%
140             \setlength\@tempdima{#1}
141             \setlength\@tempdimc{#3}
142             \advance\@tempdimc\@tempdima
143             \vrule\@width\z@\@height\@tempdimc\@depth-\@tempdima }
144     \else
145         \UseTaggingSocket{rule}{}{
146             \hbox{%
147                 \setlength\@tempdima{#1}
148                 \setlength\@tempdimb{#2}
149                 \setlength\@tempdimc{#3}
150                 \advance\@tempdimc\@tempdima
151                 \vrule\@width\@tempdimb\@height\@tempdimc\@depth-\@tempdima }
152             }
153         \fi
154 }

```

(End of definition for \@rule. This function is documented on page ??.)

```

155 \</package>

```