

The latex-lab-mathtools code^{*}

L^AT_EX Project

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Abstract

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1 Introduction

This file implements adaption to the mathtools package needed for the tagging project.

2 The Implementation

1 `<@@=math>`

2 `<*kernel>`

2.1 File declaration

3 `\ProvidesFile{latex-lab-mathtools.ltx}`

4 `[2024-07-13 v0.1a mathtools adaption]`

2.2 Tagpdf support

To make the code independent from tagging being loaded and active we load the tagpdf-base package:

5 `\RequirePackage{tagpdf-base}`

*

2.3 \shortintertext

Similar to the `\intertext` command from `amsmath`, `\shortintertext` errors with active tagging as it is processed twice which leads to duplicated structures. The fix is similar but is complicated as `mathtools` defines two version (and an additional `\intertext` version) and package options to switch between the variants.

At first we redefine all the internal commands

```

6 \ExplSyntaxOn
7 \tl_new:N\l__math_mathtools_init_tl
8 \cs_if_eq:NNTF\intertext@ \MT_intertext:
9 {
10   \tl_set:Nn \l__math_mathtools_init_tl {\MT_orig_intertext_false:}
11 }
12 {
13   \tl_set:Nn \l__math_mathtools_init_tl {\MT_orig_intertext_true:}
14 }

15 \cs_if_eq:NNTF\shortintertext@ \MT_shortintertext:n
16 {
17   \tl_put_right:Nn \l__math_mathtools_init_tl
18     {\MT_orig_shortintertext_false:}
19 }
20 {
21   \tl_put_right:Nn \l__math_mathtools_init_tl
22     {\MT_orig_shortintertext_true:}
23 }

24 \def\MT_intertext: {%
25   \def\intertext##1{%
26     \ifvmode\else\\\@empty\fi
27     \noalign{%
28       \penalty\postdisplaypenalty\vskip-\belowdisplayskip
29       \vskip-\lineskiplimit % CCS
30       \vskip\normallineskiplimit % CCS
31       \vskip\l_MT_above_intertext_sep
32       \vbox{%

```

Stop tagging when measuring:

```

33   \ifmeasuring@\tag_suspend:n{\measuring}\fi
34   \normalbaselines
35   \ifdim
36     \ifdim\@totalleftmargin=\z@
37       \linewidth
38     \else
39       -\maxdimen
40     \fi
41   =\columnwidth
42   \else \parshape\@ne \@totalleftmargin \linewidth
43   \fi

```

End the previous mc:

```

44   \tag_mc_end_push:

```

We are already in a par so we change now to Span:

```

45         \tagpdfsetup{para/tag=Span}
46         \noindent\ignorespaces##1\par

```

Restart the MC

```

47         \tag_mc_begin_pop:n{}}}%
48         \penalty\predisplaypenalty\vskip\abovedisplayskip%
49         \vskip-\lineskiplimit      % CCS
50         \vskip\normallineskiplimit % CCS
51         \vskip\l_MT_below_intertext_sep
52     }%
53 }%
54 \MH_let:NwN \shortintertext \shortintertext@
55 }

56 \def\MT_orig_shortintertext:n #1{%
57     \ifvmode\else\\\@empty\fi
58     \noalign{%
59         \penalty\postdisplaypenalty\vskip\abovedisplayshortskip
60         \vbox{%
61             \ifmeasuring@\tag_suspend:n{\measuring}\fi
62             \normalbaselines
63             \MH_if_dim:w
64             \MH_if_dim:w \@totalleftmargin=\z@
65             \linewidth
66             \MH_else:
67                 -\maxdimen
68             \MH_fi:
69             =\columnwidth
70             \MH_else:
71             \parshape\@ne \@totalleftmargin \linewidth
72             \MH_fi:
73             \tag_mc_end_push:
74             \tagpdfsetup{para/tag=Span}
75             \tagpdfparaOn
76             \noindent\ignorespaces#1\par
77             \tag_mc_begin_pop:n{}}}%
78         \penalty\predisplaypenalty\vskip\abovedisplayshortskip%
79     }%
80 }

81 \def\MT_shortintertext:n #1{%
82     \ifvmode\else\\\@empty\fi
83     \noalign{%
84         \penalty\postdisplaypenalty\vskip\abovedisplayshortskip
85         \vskip-\lineskiplimit
86         \vskip\normallineskiplimit
87         \vskip\l_MT_above_shortintertext_sep
88         \vbox{%
89             \ifmeasuring@\tag_suspend:n{\measuring}\fi
90             \normalbaselines
91             \MH_if_dim:w
92             \MH_if_dim:w \@totalleftmargin=\z@

```

```

93         \linewidth
94     \MH_else:
95         -\maxdimen
96     \MH_fi:
97     =\columnwidth
98 \MH_else:
99     \parshape\@ne \@totalleftmargin \linewidth
100 \MH_fi:
101 \tag_mc_end_push:
102 \tagpdfsetup{para/tag=P}

```

Why is it needed to enable paratagging??

```

103     \tagpdfpara0n
104     \noindent\ignorespaces#1\par
105     \tag_mc_begin_pop:n{}}}%
106     \penalty\predisplaypenalty\vskip\abovedisplayskip%
107     \vskip-\lineskiplimit
108     \vskip\normallineskiplimit
109     \vskip\l_MT_below_shortintertext_sep
110 }%
111 }

```

see <https://github.com/latex3/tagging-project/issues/734>. The multlined environment still creates a few unneeded structure, perhaps triggered by empty tags.

```

112 \renewcommand*{\MT_mult_internal:n [1]{
113 \MH_if_boolean:nF {outer_mult}{\alignedspace@left} %<-- requires amsmath 2016/11/05
114 \MT_next:
115 \bgroup
116 \Let@
117 \def\l_MT_multline_lastline_fint{0 }
118 \chardef\dspbrk@context\@ne \restore@math@cr
119 \MH_let:NwN \math@cr__math\MT_mult_mathcr_atat:w
120 \MH_let:NwN \shoveleft\MT_shoveleft:wn
121 \MH_let:NwN \shoveright\MT_shoveright:wn
122 \spread@equation
123 \MH_set_boolean_F:n {mult_firstline}
124 \MT_measure_mult:n {#1}
125 \MH_if_dim:w \l_MT_multwidth_dim<\l_MT_multline_measure_fdim
126 \MH_setlength:dn \l_MT_multwidth_dim{\l_MT_multline_measure_fdim}
127 \fi
128 \MH_set_boolean_T:n {mult_firstline}
129 \MH_if_num:w \l_MT_multline_lastline_fint=\@ne
130 \MH_let:NwN \math@cr__math \MT_mult_firstandlast_mathcr:w
131 \MH_fi:
132 \ialign\bgroup
133 \hfil\strut@$\m@th\displaystyle{}}##
134 \UseTaggingSocket{math/luamml/save/nNn}{ {} \displaystyle {mtd}}
135 $
136 \UseTaggingSocket{math/luamml/mtable/finalizecol}{last}
137 \hfil
138 \crrc
139 \hfilneg
140 #1
141 }

```

end hook

```

142 \l__math_mathtools_init_tl
143 \ExplSyntaxOff

144 </kernel>

```

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