

The `latex-lab-mathtools` code*

L^AT_EX Project
v0.80a 2024-09-18

Abstract

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1 Introduction

This file implements adaptations 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 adaptations]`

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 \AddToHook{package/mathtools/after}
9 {%
10 \cs_if_eq:NNTF\intertext@ \MT_intertext:
11 {
12 \tl_set:Nn \l__math_mathtools_init_tl {\MT_orig_intertext_false:}
13 }
14 {
15 \tl_set:Nn \l__math_mathtools_init_tl {\MT_orig_intertext_true:}
16 }
17 \cs_if_eq:NNTF\shortintertext@ \MT_shortintertext:n
18 {
19 \tl_put_right:Nn \l__math_mathtools_init_tl
20 {\MT_orig_shortintertext_false:}
21 }
22 {
23 \tl_put_right:Nn \l__math_mathtools_init_tl
24 {\MT_orig_shortintertext_true:}
25 }
26 \def\MT_intertext: {%
27 \def\intertext##1{%
28 \ifmode\else\\\@empty\fi
29 \noalign{%
30 \penalty\postdisplaypenalty\vskip-\belowdisplayskip
31 \vskip-\lineskiplimit % CCS
32 \vskip\normallineskiplimit % CCS
33 \vskip\l_MT_above_intertext_sep
34 \vbox{%

```

Stop tagging when measuring:

```

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

```

End the previous mc:

```

46 \tag_mc_end_push:

```

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

```

47 \tagpdfsetup{para/tag=Span}

```

```

48         \noindent\ignorespaces##1\par
Restart the MC
49         \tag_mc_begin_pop:n{}}%
50         \penalty\predisplaypenalty\vskip\abovedisplayskip%
51         \vskip-\lineskiplimit      % CCS
52         \vskip\normallineskiplimit % CCS
53         \vskip\l_MT_below_intertext_sep
54     }%
55 }%
56 \MH_let:NwN \shortintertext \shortintertext@
57 }

\def\MT_orig_shortintertext:n #1{%
58     \ifvmode\else\\\@empty\fi
59     \noalign{%
60         \penalty\postdisplaypenalty\vskip\abovedisplayshortskip
61         \vbox{%
62             \ifmeasuring@\tag_suspend:n{\measuring}\fi
63             \normalbaselines
64             \MH_if_dim:w
65             \MH_if_dim:w \@totalleftmargin=\z@
66             \linewidth
67             \MH_else:
68                 -\maxdimen
69             \MH_fi:
70                 =\columnwidth
71             \MH_else:
72                 \parshape\@ne \@totalleftmargin \linewidth
73             \MH_fi:
74             \tag_mc_end_push:
75             \tagpdfsetup{para/tag=Span}
76             \tagpdfparaOn
77             \noindent\ignorespaces#1\par
78             \tag_mc_begin_pop:n{}}
79         \penalty\predisplaypenalty\vskip\abovedisplayshortskip%
80     }%
81 }
82 }
83
84 \def\MT_shortintertext:n #1{%
85     \ifvmode\else\\\@empty\fi
86     \noalign{%
87         \penalty\postdisplaypenalty\vskip\abovedisplayshortskip
88         \vskip-\lineskiplimit
89         \vskip\normallineskiplimit
90         \vskip\l_MT_above_shortintertext_sep
91         \vbox{%
92             \ifmeasuring@\tag_suspend:n{\measuring}\fi
93             \normalbaselines
94             \MH_if_dim:w
95             \MH_if_dim:w \@totalleftmargin=\z@
96             \linewidth
97             \MH_else:
98                 -\maxdimen
99             \MH_fi:

```

```

100         =\columnwidth
101     \MH_else:
102         \parshape\@ne \@totalleftmargin \linewidth
103     \MH_fi:
104     \tag_mc_end_push:
105     \tagpdfsetup{para/tag=P}

```

Why is it needed to enable paratagging??

```

106     \tagpdfpara0n
107     \noindent\ignorespaces#1\par
108     \tag_mc_begin_pop:n{}}%
109     \penalty\predisplaypenalty\vskip\abovedisplayshortskip%
110     \vskip-\lineskiplimit
111     \vskip\normallineskiplimit
112     \vskip\l_MT_below_shortintertext_sep
113 }%
114 }
115

```

end hook

```

116 \l_math_mathtools_init_tl
117 }
118 \ExplSyntaxOff
119 </kernel>

```

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The italic numbers denote the pages where the corresponding entry is described, numbers underlined point to the definition, all others indicate the places where it is used.

	Symbols	<code>\ExplSyntaxOn</code> 6
<code>\</code>	28, 59, 85	
	A	F
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