

# Non-Floating Margin Notes with `marginnote` Package\*

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## Abstract

In L<sup>A</sup>T<sub>E</sub>X the command `\marginpar[⟨left⟩]{⟨right⟩}` might be used to create a note in the margin. But there is a problem with this command: it creates a special kind of float. For this it cannot be used e.g. at floats or footnotes. Package `marginnote` supports another command `\marginnote` to create notes in the margin. This does not use a kind of float and for this does not have the disadvantage of `\marginpar`. But there might be other problems ...

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## 1 How to Use `marginnote` Package

First of all you have to load. You may use:

```
\usepackage{marginnote}
```

to do so. You may also use one of the following options for a global change of the behaviour of `marginnote`:

`fulladjust` adjusts the margin note at the height and depth of the current line.

Note, that this may sometimes result in extra height and depth of the current line, but results in the best vertical alignment. This is the default.

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`heightadjust` adjusts the margin note at the height of the current line but not the depth. Note, that this may sometimes result in extra height of the current line and in vertical misplacement.

`depthadjust` adjusts the margin note at the depth of the current line but not height. Note, that this may sometimes result in extra depth of the current line and very often in vertical misplacement.

`noadjust` does not adjust the margin note at the height or depth of the current line. Note, that this often results in vertical misplacement but seldom in vertical extra space before or after the current line.

`\marginnote` The command `\marginnote[⟨left⟩]{⟨right⟩}[⟨voffset⟩]` may be used to set a margin note using `marginnote`. The first optional argument and the mandatory argument are same using `\marginpar` from the L<sup>A</sup>T<sub>E</sub>X kernel. Even `\reversemarginpar` will be considered. The note `⟨left⟩` or `⟨right⟩` will be put at the current vertical position. Second optional argument `⟨voffset⟩` may be used to adjust the vertical position of the margin note. Use a negative dimension to move it up or a positive dimension to move it down.

`\marginnoteleftadjust`  
`\marginnoterightadjust` At some environments, e.g. `framed` from the `framed` package the horizontal placement of the margin notes are not correct. In this case you may redefine `\marginnoteleftadjust` and `\marginnoterightadjust` to fix this. Note that these are macros not lengths! So you have to use `\renewcommand`, `\def` or `\let` to change them. You may e.g. use

```
\begingroup
\makeatletter
\g@addto@macro\framed{%
\let\marginnoteleftadjust\FrameSep
\let\marginnoterightadjust\FrameSep
}
\endgroup
```

at your preamble after loading package `framed` to fix the problem using `framed` environment.

NOTE: `\marginnoteleftadjust` and `\marginnoterightadjust` will be used only, if the correct horizontal position cannot be determined using PDF<sub>T</sub>E<sub>X</sub> features (`\pdfsavepos` and `\pdfsavepos`). So if you are using PDF<sub>L</sub>A<sub>T</sub>E<sub>X</sub> with PDF output or PDF<sub>L</sub>A<sub>T</sub>E<sub>X</sub> with PDF<sub>T</sub>E<sub>X</sub>-version since 1.40 or X<sub>G</sub><sub>T</sub>E<sub>X</sub> you will not need to use the example code above, but you will need at least two L<sup>A</sup>T<sub>E</sub>X runs to get the correct horizontal positions of the margin notes.

`\marginnotetextwidth` Package `marginnote` needs to know the real width of the type area to find the right margin. While some environments (e.g. those of package `framed`) change `\textwidth`, `marginnote` defines its own text width macro. If you change type area after `\begin{document}` you should add

```
\edef\marginnotetextwidth{\the\textwidth}
```

after changing the type area. Maybe you should do this globally using `\xdef` instead of `\edef`. Most users will never need to change `\marginnotetextwidth`.

`\marginnotevadjust`

At some environments the vertical adjustment of the margin note will be wrong, e.g. one base line to low. In this case you may use the additional optional argument of `\marginnote` at every usage of `\marginnote` or redefine `\marginnotevadjust` at the begin of the environment. The default definition is `0pt`.

`\raggedleftmarginnote`  
`\raggedrightmarginnote`

These macros define how the margin note will be aligned. The defaults are:

- align margin notes at the left margin right to the margin,
- align margin notes at the right margin left to the margin.

You may change this using `\renewcommand`, e.g. use

```
\renewcommand*{\raggedleftmarginnote}{}  
\renewcommand*{\raggedrightmarginnote}{\centering}
```

to get justified text at the left and centered text at the right margin.

`\marginfont`

This macro defines the font that will be used to set margin notes. The default is `\normalcolor`. You may use `\renewcommand` to change this, e.g. use

```
\renewcommand*{\marginfont}{\color{red}\sffamily}
```

to get red colored margin notes in sans serif font family. You need to load e.g. package `color` to use `\color`.

## 2 Known Problems Using `marginnote`

At double side layout (e.g. using class option `twoside`) `\marginnote` needs to know the number of the current page to decide whether the page is odd or even and so whether to use left or right margin.  $\text{\LaTeX}$  uses an asynchronous output. Because of this counter `page` should not be used to get the number of the current page unless you are at page head or foot. To solve the problem `marginnote` uses a mechanism similar to labels. But this means, that the correct margin won't be known at this  $\text{\LaTeX}$  run but only at the next. So after adding or deleting a margin note or after each change of page break you need two  $\text{\LaTeX}$  runs to get all margins right.

The command `\marginnote` uses `\strut` and `\vadjust` to put the margin note at the correct position. But under some circumstances this may fail. You may adjust the vertical position of the margin note using the second optional argument of `\marginnote`. Sometimes even the text outside `\marginnote` will be moved because of using `\marginnote`. You may use one of the package options `fulladjust`, `heightadjust`, `depthadjust` or `noadjust` to change the global adjustment or a local redefinition of `\mn@strut` or `\mn@zbox`.

Note: The margin note will be placed at the current vertical line. This means, if you are using two `\marginnote` commands at the same line, they will be put on the same place. This is not a bug but a feature!

Since release 1.1b `\marginnote` between paragraphs (in vertical mode) will place the note between the paragraphs instead of the end of the previous paragraph.

You may use `\leavevmode` or the third optional argument of `\marginnote` to place it different.

No page break may occur inside a margin note created with `\marginnote`.

`\marginnote` somewhat different from `\marginpar` if used immediately after `\item`. This is not a bug, it's a feature!

With math `\marginnote` may work or may not depending on the math environment.

If you are using  $X_{\text{g}}\text{TeX}$ ,  $\text{PDFL}^{\text{A}}\text{TeX}$  since version 1.40 or  $\text{PDFL}^{\text{A}}\text{TeX}$  before version 1.40 with PDF output and the horizontal position of a margin note is wrong, do one more  $\text{PDFL}^{\text{A}}\text{TeX}$  run.

Sometimes lines are stretched vertically using `\marginnote`, e.g. if you're using `\marginnote` at a list *and* upper case umlauts like “Ü” or if `\lineskiplimit>Opt`. In this case `\lineskiplimit=Opt` or `\lineskiplimit=-\maxdimen`, or one of the options may help.

You should not use `\marginnote` at the optional argument of `\item`.

### 3 Implementation

First test  $\varepsilon\text{-TeX}$ .

```
1 \begingroup
2 \def\@tempb{ }%
3 \def\@tempa{%
4   \PackageError{marginnote}{seems you are not running e-TeX\@tempb}{%
5     Since 2004 the LaTeX team recommends to use e-TeX.\MessageBreak
6     marginnote since version 1.1d uses e-TeX features.\MessageBreak
7     At actual systems 'latex' should already use e-TeX.\MessageBreak
8     At deprecated systems it may be called 'elatex'.\MessageBreak
9     Use either unsupported marginnote up to version 1.1c or\MessageBreak
10    ask you administrator for LaTeX using e-TeX\@tempb.\MessageBreak
11    Not using e-TeX\@tempb\space is a fatal error!\MessageBreak
12    Processing cannot be continued!}%
13 \endgroup
14 \batchmode \errmessage{ }\csname @@end\endcsname\end\relax
15 \csname endinput\endcsname
16 }%
17 \expandafter\ifx\csname eTeXversion\endcsname\relax\else
18   \ifnum\eTeXversion <2
19     \def\@tempb{ V 2}%
20   \else
21     \let\@tempa\endgroup
22   \fi
23 \fi
24 \@tempa
```

Next declare and process the options.

`\if@mn@verbose` Use verbose output mode by default. But you may change this using option `quiet`.

```
25 \newif\if@mn@verbose\@mn@verbosetrue
```

```

26 \DeclareOption{verbose}{\@mn@verbostrue}
27 \DeclareOption{quiet}{\@mn@verbostrue}

```

`\mn@strut` The package needs to adjust the margin note at the current line. Sometimes this provokes extra vertical line spacing. To avoid this you may redefine `\mn@strut`. The default value is `\strut`.

```

28 \newcommand*\mn@strut{}

```

`\mn@zbox` This macro is used to set a horizontal box without height, depth and width.

```

29 \newcommand{\mn@zbox}[1]{}

```

The options do redefine both, `\mn@strut` and `\mn@zbox`.

```

30 \DeclareOption{fulladjust}{%
31   \renewcommand*\mn@strut{\strut}%
32   \renewcommand{\mn@zbox}[1]{%
33     \bgroup
34       \setbox\@tempboxa\vbox{#1}%
35       \ht\@tempboxa\ht\strutbox
36       \dp\@tempboxa\dp\strutbox
37       \wd\@tempboxa\z@
38       \box\@tempboxa
39     \egroup
40   }%
41 }
42 \DeclareOption{heightadjust}{%
43   \renewcommand*\mn@strut{\begingroup\dp\strutbox\z@\strut\endgroup}%
44   \renewcommand{\mn@zbox}[1]{%
45     \bgroup
46       \setbox\@tempboxa\vbox{#1}%
47       \ht\@tempboxa\ht\strutbox
48       \dp\@tempboxa\dp\z@
49       \wd\@tempboxa\z@
50       \box\@tempboxa
51     \egroup
52   }%
53 }
54 \DeclareOption{depthadjust}{%
55   \renewcommand*\mn@strut{\begingroup\ht\strutbox\z@\strut\endgroup}%
56   \renewcommand{\mn@zbox}[1]{%
57     \bgroup
58       \setbox\@tempboxa\vbox{#1}%
59       \ht\@tempboxa\ht\z@
60       \dp\@tempboxa\dp\strutbox
61       \wd\@tempboxa\z@
62       \box\@tempboxa
63     \egroup
64   }%
65 }
66 \DeclareOption{noadjust}{%

```

```

67 \renewcommand*{\mn@strut}{\relax}%
68 \renewcommand{\mn@zbox}[1]{%
69   \bgroup
70     \setbox\@tempboxa\vbox{\kern-\ht\strutbox #1}%
71     \ht\@tempboxa\ht\z@
72     \dp\@tempboxa\dp\z@
73     \wd\@tempboxa\z@
74     \box\@tempboxa
75   \egroup
76 }%
77 }

78 \ExecuteOptions{verbose,fulladjust}
79 \ProcessOptions\relax

```

`\newmarginnote` We need a macro to define a new note at the aux file. This will be done using the mechanism of L<sup>A</sup>T<sub>E</sub>X that is used for `\newlabel`. But we use another prefix. This will result in the usual “Labels(s) may have changed. Rerun to get cross-references right.” if a margin note is new or have moved to another page.

```
80 \newcommand*{\newmarginnote}{\@newl@bel{mn}}
```

`\ifmn@pdfmode` We need to know, whether or not PDF<sub>T</sub>E<sub>X</sub> and which version of PDF<sub>T</sub>E<sub>X</sub> is used.  
`\@mn@mode@prefix` With PDF<sub>T</sub>E<sub>X</sub> the horizontal output position may be detected using `\pdfsavepos` and `\pdflastxpos`. So the relative position of the margin may be calculated. Without PDF<sub>T</sub>E<sub>X</sub> only manual adjustment is available. While PDF mode or not may change before start of the document, setting up the switch is delayed.

```

81 \newif\ifmn@pdfmode\@mn@pdfmodefalse
82 \newcommand*{\@mn@mode@prefix}{pdf}
83 \AtBeginDocument{%
84   \begingroup\expandafter\expandafter\expandafter\endgroup
85   \expandafter\ifx\csname pdflastxpos\endcsname\relax
86     \begingroup\expandafter\expandafter\expandafter\endgroup
87     \expandafter\ifx\csname lastxpos\endcsname\relax\else
88       \@mn@pdfmodetrue
89       \renewcommand*{\@mn@mode@prefix}{}%
90     \fi
91   \else % bg or 1
92     \begingroup\expandafter\expandafter\expandafter\endgroup
93     \expandafter\ifx\csname pdftexversion\endcsname\relax % bg 2
94       \begingroup\expandafter\expandafter\expandafter\endgroup
95       \expandafter\ifx\csname pdfoutput\endcsname\relax % bg 3
96         \begingroup\expandafter\expandafter\expandafter\endgroup
97         \expandafter\ifx\csname XeTeXrevision\endcsname\relax\else % bg 4
98           \@mn@pdfmodetrue
99         \fi % ed 4
100      \else % or 3
101        \ifcase\pdfoutput\else\@mn@pdfmodetrue\fi % bg ed 4
102      \fi % ed 3
103    \else % or 2

```

```

104     \ifnum \pdfTeXversion<140 % bg 3
105         \begingroup\expandafter\expandafter\expandafter\endgroup
106         \expandafter\ifx\csname pdfoutput\endcsname\relax % bg 4
107         \else % or 4
108             \ifcase\pdfoutput\else\@mn@pdfmodetrue\fi % bg ed 5
109         \fi % ed 4
110     \else % or 3
111         \@mn@pdfmodetrue
112     \fi % ed 3
113 \fi % ed 2
114 \fi % ed 1
115 \if@mn@verbose
116     \if@mn@pdfmode
117         \PackageInfo{marginnote}{%
118             \string\pdfoutput\space not 0 or unimportant and\MessageBreak
119             \string\pdfLASTxpos\space or \string\lastxpos\space
120             available.\MessageBreak
121             Extended position detection mode activated@gobble
122         }%
123     \else
124         \PackageInfo{marginnote}{%
125             either \string\pdfLASTxpos\space or \string\pdfoutput\space not
126             available\MessageBreak
127             or \string\pdfoutput\space set to 0.\MessageBreak
128             Extended position detection mode deactivated@gobble
129         }%
130     \fi
131 \fi
132 }

```

`\marginnotetextwidth` Some environments change `\textwidth`. But at PDF mode we need to know the real text width to find the right margin. So we use our own text width macro. Sometimes it may be useful if the user can set it up. Because of this it is a user command.

```

133 \newcommand*{\marginnotetextwidth}{}
134 \let\marginnotetextwidth\textwidth
135 \AtBeginDocument{\if@mn@pdfmode\edef\marginnotetextwidth{\the\textwidth}\fi}

```

`\@mn@margintest` Macro `\@mn@margintest` does the complete test, which margin to use. The result may be found at `\if@tempwa`. To avoid changes on the last page if there is a new note on the first page, try to count the notes by page. We know that this can not be successful, but never the less it may be a good try. `\@mn@thispage` saves the page number of the last usage of `\@mn@margintest`. `\@mn@atthispage` saves the number of margin note at this page. But we need to know the absolute page number to do this. So we increase the absolute page number `mn@abspage` at every `\@outputpage`. `\@mn@currpage` is the page from the page label if found. `\@mn@currxpos` is somehow special. Using PDF<sub>T</sub>E<sub>X</sub> the real  $x$  position may be written with the page label and used to calculate the correct horizontal offset.

In this case `\marginnoteleftadjust` and `\marginnoterightadjust` will not be used!

```

136 \newcommand*{\@mn@thispage}{}
137 \newcommand*{\@mn@currpage}{}
138 \newcommand*{\@mn@currxpos}{}
139 \newcounter{mn@abspage}
140 \AtBeginDocument{\setcounter{mn@abspage}{1}}%
141 \g@addto@macro\@outputpage{\stepcounter{mn@abspage}}
142 \newcommand*{\@mn@margintest}{%

```

Number of the next margin note at this page.

```

143 \expandafter\ifx\csname @mn@thispage\endcsname\@empty
144 \gdef\@mn@atthispage{1}%
145 \else\expandafter\ifnum \@mn@thispage=\value{mn@abspage}%
146 \beginingroup
147 \@tempcnta\@mn@atthispage\advance\@tempcnta by \@ne
148 \xdef\@mn@atthispage{\the\@tempcnta}%
149 \endgroup
150 \else
151 \gdef\@mn@atthispage{1}%
152 \fi
153 \fi
154 \xdef\@mn@thispage{\themn@abspage}%

```

Use the number of the page and the number of the margin note at this page to save the real number of this page at the aux file. At PDF mode save the current *x* position too.

```

155 \let\@mn@currpage\relax
156 \let\@mn@currxpos\relax
157 \if@mn@pdfmode
158 \@nameuse{\@mn@mode@prefix savepos}%
159 \protected@write\@auxout{\let\themn@abspage\relax}{%
160 \string\newmarginnote{note.\@mn@thispage.\@mn@atthispage}{%
161 {\themn@abspage}{\noexpand\number\@nameuse{\@mn@mode@prefix lastxpos}sp}}%
162 }%
163 \else
164 \protected@write\@auxout{\let\themn@abspage\relax}{%
165 \string\newmarginnote{note.\@mn@thispage.\@mn@atthispage}{%
166 {\themn@abspage}{}}%
167 }%
168 \fi

```

If the margin note label was not defined, it seems to be new. In this case the absolute page number will be used for the test instead of the saved real page number.

```

169 \expandafter\ifx\csname mn@note.\@mn@thispage.\@mn@atthispage\endcsname\relax

```

If we are not in two side mode, we are on a odd page.

```

170 \if@twoside
171 \if@mn@verbose
172 \PackageInfo{marginnote}{Suggest that margin
173 note \@mn@thispage.\@mn@atthispage\space will be on\MessageBreak

```



```

174         absolute page \themn@abspage.\MessageBreak
175         This may be wrong}%
176     \fi
177     \ifodd\value{mn@abspage}\@tempwattrue\else\@tempwafalse\fi
178 \else
179     \if@mn@verbose
180         \PackageInfo{marginnote}{right page because not two side mode}%
181     \fi
182     \@tempwattrue
183 \fi
184 \else
185     \edef\@mn@currpage{\csname
186         mn@note.\@mn@thispage.\@mn@atthispage\endcsname}%
187     \edef\@mn@currxpos{\expandafter\@secondoftwo\@mn@currpage}%

```

Ulrike Fischer suggested a simple change to take care of `\hoffset`, e.g., using package `crop`. We use this occasion to take care of `\pdfhorigin`, too. If `\@mn@currxpos` is not empty here, it should be corrected by `\hoffset` and maybe by `\pdfhorigin`.

```

188     \ifx\@mn@currxpos\@empty\else
189         \edef\@mn@currxpos{\the\dimexpr \@mn@currxpos -\hoffset\relax}%
190         \begingroup\expandafter\expandafter\expandafter\endgroup
191         \expandafter\ifx\csname pdfhorigin\endcsname\relax\else
192             \begingroup\expandafter\expandafter\expandafter\endgroup
193             \expandafter\ifx\csname pdfoutput\endcsname\relax
194                 \begingroup\expandafter\expandafter\expandafter\endgroup
195                 \expandafter\ifx\csname outputmode\endcsname\relax\else
196                     \ifnum \outputmode=1 %
197                         \edef\@mn@currxpos{\the\dimexpr \@mn@currxpos -\pdfhorigin
198                             +1in\relax}%
199                     \fi
200                 \fi
201             \else
202                 \ifnum \pdfoutput=1 %
203                     \edef\@mn@currxpos{\the\dimexpr \@mn@currxpos -\pdfhorigin
204                         +1in\relax}%
205                 \fi
206             \fi
207         \fi

```

If you are using package `bidi` and RTL mode is active, the position is from right instead of left. So we have to subtract `\@mn@currxpos` from `\pdfpagewidth` (or `\pagewidth` using `LuaTeX`, but this cannot be, because `bidi` is not `LuaTeX`-compatible).

```

208     \begingroup\expandafter\expandafter\expandafter\endgroup
209     \expandafter\ifx\csname \@mn@mode@prefix pagewidth\endcsname\relax\else
210         \@mn@if@RTL{%
211             \PackageInfo{marginnote}{Margin note
212                 \@mn@thispage.\@mn@atthispage\space in RTL mode}%
213             \edef\@mn@currxpos{%

```

```

214         \the\dimexpr\@nameuse{\@mn@mode@prefix pagewidth}
215         -\@mn@currxpos\relax
216     }%
217 }-{}%
218 \fi
219 \fi
220 \edef\@mn@currpage{\expandafter\@firstoftwo\@mn@currpage}%
221 \if@mn@verbose
222     \PackageInfo{marginnote}{Margin note \@mn@thispage.\@mn@atthispage\space
223     is on absolute page \@mn@currpage\MessageBreak}%
224 \fi
225 \if@twoside
226     \ifodd\@mn@currpage\relax
227         \@tempwattrue
228     \else
229         \@tempwafalse
230     \fi
231 \else
232     \if@mn@verbose
233         \PackageInfo{marginnote}{right page because not two side mode}%
234     \fi
235     \@tempwattrue
236 \fi
237 \fi
238 }

```

`@mn@ifRTL` Test, whether or not `\if@RTL` exists and is true or false.

```

239 \newcommand*{\@mn@if@RTL}{%
240 \begingroup\expandafter\expandafter\expandafter\endgroup
241 \expandafter\ifx\csname if@RTL\endcsname\iftrue
242 \expandafter\@firstoftwo
243 \else
244 \expandafter\@secondoftwo
245 \fi
246 }

```

`\marginnote` Command `\marginnote` is the main macro of the package. The others are helpers to manage the optional arguments.

```

\@mn@@marginnote 247 \newcommand*{\marginnote}{%
\@mn@@@marginnote 248 \@dblarg\@mn@marginnote
249 }
250 \newcommand{\@mn@marginnote}[2][ ]{%
251 \ifhmode
252 \@bsphack
253 \begingroup
254 \ifdim\@savsk>\z@\else
255 \def\:{\@xifch}\expandafter\def\:{ \futurelet\@let@token\@ifnch}%
256 \fi
257 \else
258 \begingroup

```

```

259 \fi
260 \@ifnextchar [{\@mn@@marginnote[#{1}]{#2}}{\@mn@@marginnote[#{1}]{#2}[\z@]}%
261 }
262 \newcommand{\@mn@@marginnote}{%
263 \long\def\@mn@@marginnote[#1]#2[#3]{%
264 \endgroup

```

In horizontal mode the space hack of the L<sup>A</sup>T<sub>E</sub>X kernel will be used. In vertical mode this should not be used.

```

265 \ifhmode
266 \@mn@@marginnote[#{1}]{#2}[#{3}]%
267 \@esphack
268 \else
269 \@mn@@marginnote[#{1}]{#2}[#{3}]%
270 \fi
271 }
272 \newcommand{\@mn@@marginnote}{%
273 \long\def\@mn@@marginnote[#1]#2[#3]{%

```

All changes (but change of counters that are global because of using the L<sup>A</sup>T<sub>E</sub>X commands to change them an `\gdef` and `\xdef`) should be local. In h-mode a `\strut` will be used to fix base line. The margin note will be put to vertical list using `\vadjust`. This also means that we are one line too deep. This will be corrected later using negative kern. In v-mode we use a special kind of vbox to simply set everything. Math mode should behave like v-mode. And if we are just after an item we have to leave v-mode first.

```

274 \begingroup
275 \ifmmode\mn@strut\let\@tempa\mn@vadjust\else
276 \if@inlabel\leavevmode\fi
277 \ifhmode\mn@strut\let\@tempa\mn@vadjust\else\let\@tempa\mn@vlap\fi
278 \fi
279 \@tempa%

```

Everything will be put upwards using a vbox with zero height and depth and `\vss`. At this box the margin test will be done. If `csreversemargin` was used, the logic switches. Then the note will be placed to the margin.

```

280 \vbox to\z@{%
281 \vss
282 \@mn@margintest
283 \if@reversemargin\if@tempswa
284 \@tempswafalse
285 \else
286 \@tempswatrue
287 \fi\fi
288 \if@tempswa
289 \rlap{%

```

If `\@mn@currxpos` is neither `\relax` nor empty it is the real current  $x$  position of the last PDF L<sup>A</sup>T<sub>E</sub>X run and may be used to calculate the real horizontal offset.

```

290 \ifx\@mn@currxpos\relax

```

```

291         \kern\marginnoterightadjust
292         \if@mn@verbose
293             \PackageInfo{marginnote}{%
294                 xpos not known,\MessageBreak
295                 using \string\marginnoterightadjust}%
296         \fi
297     \else\ifx\@mn@currxpos\@empty
298         \kern\marginnoterightadjust
299         \if@mn@verbose
300             \PackageInfo{marginnote}{%
301                 xpos not known,\MessageBreak
302                 using \string\marginnoterightadjust}%
303         \fi
304     \else
305         \if@mn@verbose
306             \PackageInfo{marginnote}{%
307                 xpos seems to be \@mn@currxpos,\MessageBreak
308                 \string\marginnoterightadjust
309                 \space ignored}%
310         \fi
311     \begingroup
312         \setlength{\@tempdima}{\@mn@currxpos}%
313         \kern-\@tempdima
314         \if@twoside\ifodd\@mn@currpage\relax
315             \kern\oddsidemargin
316         \else
317             \kern\evensidemargin
318         \fi
319         \else
320             \kern\oddsidemargin
321         \fi
322         \kern 1in
323     \endgroup
324     \fi
325     \fi
326     \kern\marginnotetextwidth\kern\marginparsep
327     \vbox to\z@{\kern\marginnotevadjust\kern #3
328         \vbox to\z@{%
329             \hsize\marginparwidth
330
331             \linewidth\hsize

```

Here's the correction of the vertical position. The remain is simple.

```

331         \kern-\parskip
332         \marginfont\raggedrightmarginnote\strut\hspace{\z@}%
333         \ignorespaces#2\endgraf
334         \vss}%
335     \vss}%
336     }%
337     \else

```

Using the left margin.

```
338      \llap{%
339          \vbox to\z@{\kern\marginnotevadjust\kern #3
340              \vbox to\z@{%
341                  \hsize\marginparwidth
342              }
          }
      \linewidth\hsize
```

Same like above for left margins.

```
343      \kern-\parskip
344      \marginfont\raggedleftmarginnote\strut\hspace{\z@}%
345      \ignorespaces#1\endgraf
346      \vss}%
347      \vss}%
348      \ifx\@mn@currxpos\relax
349      \kern\marginnoteleftadjust
350      \if@mn@verbose
351      \PackageInfo{marginnote}{%
352          xpos not known,\MessageBreak
353          using \string\marginnoteleftadjust}%
354      \fi
355      \else\ifx\@mn@currxpos\@empty
356      \kern\marginnoteleftadjust
357      \if@mn@verbose
358      \PackageInfo{marginnote}{%
359          xpos not known,\MessageBreak
360          using \string\marginnoteleftadjust}%
361      \fi
362      \else
363      \if@mn@verbose
364      \PackageInfo{marginnote}{%
365          xpos seems to be \@mn@currxpos,\MessageBreak
366          \string\marginnoteleftadjust
367          \space ignored}%
368      \fi
369      \begingroup
370      \kern\@mn@currxpos
371      \if@twoside\ifodd\@mn@currpage\relax
372      \kern-\oddsidemargin
373      \else
374      \kern-\evensidemargin
375      \fi
376      \else
377      \kern-\oddsidemargin
378      \fi
379      \kern-1in
380      \endgroup
381      \fi
382      \fi
383      \kern\marginparsep
```

```

384         }%
385         \fi
386     }%
387 }%
388 \endgroup
389 }

```

`\marginnoterightadjust` These may be used to define an automatic horizontal adjust. The default is zero.  
`\marginnoteleftadjust` They will be used only if not PDF<sub>T</sub>E<sub>X</sub> or PDF<sub>T</sub>E<sub>X</sub> before version 1.40 in DVI mode is used, because in this case the save position features are not available.

```

390 \newcommand*{\marginnoterightadjust}{}
391 \newcommand*{\marginnoteleftadjust}{}
392 \let\marginnoterightadjust\z@
393 \let\marginnoteleftadjust\z@

```

`\marginnotevadjust` This may be used to define an automatic vertical adjust. The default is zero. Values greater than zero will move the margin note down, values less than zero will move the margin note up.

```

394 \newcommand*{\marginnotevadjust}{}
395 \let\marginnotevadjust\z@

```

`\mn@vlap` This macro is used to set a vertical box without size at vertical mode.

```

396 \newcommand{\mn@vlap}[1]{%
397   \setbox\@tempboxa\vbox to \ht\strutbox{#1\vss}%
398   \box\@tempboxa\vskip-\baselineskip
399 }

```

`\mn@vadjust` This macro is used to set a vertical box at horizontal mode.

```

400 \newcommand{\mn@vadjust}[1]{%
401   \mn@zbox{\kern-\parskip
402     \leavevmode\vadjust{#1}%
403     \kern\parskip
404   }%
405 }

```

`\marginfont` These are very simple. A class may also define `\marginfont`. Use this if available.

`\raggedleftmarginnote` I don't use `\let` for the definitions of the ragged macros, so the meaning may change loading e.g. package `ragged2e`.

```

406 \providecommand*{\marginfont}{}
407 \newcommand*{\raggedleftmarginnote}{\raggedleft}
408 \newcommand*{\raggedrightmarginnote}{\raggedright}

```

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