The **alttex** package

Arno L. Trautmann[*]

Version 0.a, 2008 December 17

This is the package `alttex` which will try to give an experimental new way to write LaTeXcode. So far it is mostly done with very dirty and actually it's a collection of things I think about in boring lectures. Maybe someone will have fun with the following code.

Contents

1 introduction

The problem I have with LaTeX is the antique way of typing. Because most people still use a hopeless outdated keyboard layout („qertzy" or slightly adapted versions of that), LaTeXdoesn't make use of some cool features. I'm not talking about writing chinese or arabic text. Maybe this example will make the idea clear:

In standard LaTeX, one has to write

```
This is the normal text, then comes the itemization:
\begin{itemize}
  \item text for first item
  \item \begin{itemize}
        \item this is an item inside an item…
        \item another item
        \end{itemize}
  \item and the outer itemize goes on…
\end{itemize}
```

Using this package, you can simply write[1]

---

[*]arno.trautmann@gmx.de

[1]The lmodern font I'm using here does not have the symbol for the inner item…

```
This is the normal text, then comes the itemization:

• text for first itemi
•

    this is an item inside an item
    another item

• and the outer itemize goes on…

And your normal text goes on…
```

Well, actually I'm lying now. But it's the aim of this package to provide this –
besides many, many other funny and cool things. I have just started it, there will
be much more stuff here.

```
1 \ProvidesPackage{alttex}
2
3 \RequirePackage{exscale} % For huge math
4
5 \catcode`\•=\active
6 \catcode`\ =\active
7
```

2 Math stuff

2.1 braces

\newbraces Now this is something most LaTeX-beginners don't recognize and wonder why the
\oldbraces formula looks so ugly: The braces () do not fit to the hight of the formula. This
can be achieved by putting \left and \right in front of the braces. But actually,
this is annoying! In almost any case you want this behaviour, so this should be the
standard. So we redefine the way braces are handled. With \newbraces the ( )
always fit. If you prefer the normal LaTeX way, use \oldbraces to reset everything.
This new behaviour should be extended to other characters like | [{ < and so
on. Maybe in version 0.0.1…

I would have never been able to implement this without the help of the mail-
inglist members of TEX-D-L@LISTSERV.DFN.DE!

The redefinition of \mathstrut is necessary when using amsmath (you will use
amsmath when typesetting formulae, won't you?), because the hight of formulae
is determinated by the hight of a brace. But using ( ) as \active characters, we
need another brace here. So we take [. This will probably also change. But the
code is working fine for ( ).

```
 8 \makeatletter
 9 \def\resetMathstrut@{%
10   \setbox\z@\hbox{%
11     \mathchardef\@tempa\mathcode`\[\relax
```

```
12      \def\@tempb##1"##2##3{\the\textfont"##3\char"}%
13      \expandafter\@tempb\meaning\@tempa \relax
14 }%
15   \ht\Mathstrutbox@\ht\z@ \dp\Mathstrutbox@\dp\z@
16 }
17 \makeatother
18
19 \edef\oldbraces{
20   \mathcode`(\the\mathcode`(
21   \mathcode`)\the\mathcode`)
22 }
23 \begingroup
24   \catcode`(\active \xdef({\left\string(}
25   \catcode`)\active \xdef){\right\string)}
26 \endgroup
27 \def\newbraces{
28
29   \mathcode`("8000
30   \mathcode`)"8000
31 }
```

3   itemize and similar things

```
32
33 \newcounter{itemi}
34 \setcounter{itemi}{0}
35
36 \def•{
37   \ifvmode \ifnum \theitemi = 0 %außerhalb einer itemize
38     \begin{itemize}\setcounter{itemi}{1}
39       \item
40     \else
41       \item %zum Fortsetzen einer Liste
42     \fi
43   \else
44     \item % normales item innerhalb einer Liste
45   \fi
46 }
47
48 \def {
49   \ifvmode
50     \begin{itemize}
51       \item
52   \else
53     \item
54   \fi
55 }
56
57 \def\-{\end{itemize}}
```

```
 58
 59
 60 \newcounter{insideitemize}
 61 \setcounter{insideitemize}{0}
 62 \newcounter{insideitem}
 63 \setcounter{insideitem}{0}
 64
 65 \catcode`\•=\active
 66
 67 \iffalse
 68 \def•{
 69   \ifnum \theinsideitemize = 0 % Außerhalb einer itemize-Umgebung  initialisieren
 70     \begin{itemize}
 71       \iffalse
 72       \catcode`\^^M=\active
 73       \def^^M{\myeol} \catcode`\^^M=5%
 74       \fi
 75       \setcounter{insideitemize}{1} % Nun innerhalb einer itemize
 76       \setcounter{insideitem}{1}% und innerhalb eines Items
 77       \expandafter\item
 78   \else
 79     \makeatletter
 80       \ifthenelse{\boolean{@inlabel}}{%
 81     \makeatother
 82       tach
 83 }{%
 84     \makeatother
 85       \setcounter{insideitem}{1}% innerhalb eines items
 86       \expandafter\item
 87 }
 88   \fi
 89 }
 90 \fi
 91
 92 \def\myeol{%
 93   \ifnum \theinsideitem = 0%
 94     \end{itemize}%
 95     \catcode`\^^M=5%
 96     \setcounter{insideitem}{0}%
 97   \else%
 98     \setcounter{insideitem}{0}%
 99 \fi%
100 }
101 % \end{macrocode}
102
103 % Definiert eine übergroße Displaystyle-Formel – nützlich z.B. bei Präsentationen.
104 \def\hugedisplaymath{
105 \makeatletter
106 \def\fontsize@before@hugemath{}
107 \makeatother
```

```
108 \Huge
109   \begin{equation*}
110 }
111 \def\endhugedisplaymath{
112   \end{equation*}
113 }
```