

The `tlgart` package*

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1 Introduction

The `tlgart` package is provided for authors of articles to appear in collections in the book series “Texts in Logic and Games”, published by Amsterdam University Press. It was written by Joel Uckelman. Deviations from standard \LaTeX are few and noted below.

2 Usage

2.1 Frontmatter

2.1.1 Document class and required packages

The `tlgart` package is intended for use with the `book` document class. `tlgart` loads the following packages: `amsthm`, `amssymb`, and `geometry`. If you want to add other packages, load them before the `\usepackage{tlgart}` line. Please use as few packages as possible, and use them only if absolutely necessary. This means that your paper should begin with the following lines:

```
\documentclass{book}
\usepackage{<your packages>}
\usepackage{tlgart}
```

2.1.2 Title & author information

The following commands are provided for specifying title and author information to be placed in the title block of your article:

```
\title{<short title>}{<full title>}
\author{<short name>}{<full name>}
\address{<author's address>}
\email{<email address>}
```

The short form of the author’s name will appear in the running heads on even pages of the article, while the short form of the article’s title will appear on odd

*This document corresponds to `tlgart` v0.3.0, dated 2007/12/11.

pages. Please include your first name in the full name, and use initials in the short name (see example below).

Line breaks (`\`) may appear in the full title, full name, author's address and email address, as necessary. `\thanks{text}` may appear in the full name argument of `\author`. For articles with multiple authors, give full names separated by `\and` and short names separated by commas. Separate multiple addresses by `\and`, and reference addresses using `\addr{number}`.

Please enter your address in the format

```
<Address> \\
<University> \\
<Postal Address> \\
<City & ZIP Code>, <Country>
```

adding additional lines if necessary and appropriate. Please use the full name of your institute (no abbreviations) and the official name of your university (in the example below, "Rheinische Friedrich-Wilhelms-Universität Bonn" instead of "Universität Bonn"). Do not translate the name of your institute and university unless the original name uses a different alphabet. As an example, the following code

```
\title{An Example Paper}
      {An Example Paper for the \texttt{tlgart} Documentation}
\author{B.~L"owe, J.~Uckelman}
      {Benedikt L"owe\addr{1,2} \and Joel Uckelman\addr{1}}
\address{Institute for Logic, Language and Computation \\
         Universiteit van Amsterdam\\
         Plantage Muidergracht 24\\
         1018 TV Amsterdam, The Netherlands
         \and
         Mathematisches Institut\\
         Rheinische Friedrich-Wilhelms-Universit"at Bonn\\
         Berlingstra{\ss}e 1\\
         53115 Bonn, Germany}
\email{\{bloewe,juckelma\}@illc.uva.nl}
```

produces the following in the title block:

An Example Paper for the tlgart Documentation

Benedikt Löwe^{1,2}

Joel Uckelman¹

¹ Institute for Logic, Language and Computation
Universiteit van Amsterdam
Plantage Muidergracht 24
1018 TV Amsterdam, The Netherlands

² Mathematisches Institut
Rheinische Friedrich-Wilhelms-Universität Bonn
Berlingstraße 1
53115 Bonn, Germany
{bloewe,juckelma}@illc.uva.nl

`\title`, `\author`, `\address`, and `\email` must be specified *prior* to the `\maketitle` command, since `\maketitle` uses the values specified there to construct the title block, table of contents entry and bibliographic information in the footer of the title page.

2.1.3 Macros

Please enter your personal macros after the title and author information and before `\begin{document}`. Please include only macros that you are actually using.

2.2 Sectioning

2.2.1 The `\maketitle` command

The `\maketitle` command is used right after `\begin{document}` to create the title block for your article, and takes no arguments. It should appear in your article exactly once. `\maketitle` also sets up the running heads and inserts the article into the Table of Contents, using the information provided in `\title`, `\author`, `\address`, and `\email`.

2.2.2 The abstract environment

Put your abstract in the `abstract` environment, following the `\maketitle` command. Usage is unchanged from the `article` class.

2.2.3 The `\part` & `\chapter` commands

Do not use `\part` or `\chapter` in your article. They are reserved for higher-level structure of volumes.

2.2.4 `\section` & co.

All subchapter sectioning commands (`\section`, `\subsection`, `\subsubsection`, `\paragraph`, `\subparagraph`, and their starred versions) may be used as usual.

2.2.5 References

A bibliography may be produced in the standard way with the `thebibliography` environment and `\bibitem` command.

2.2.6 Appendices

Put appendices after the references. Use the `\appendix` command to switch to appendix numbering. For a single unlettered appendix, called “Appendix”, use `\section*{Appendix}`. For multiple appendices, called “Appendix A”, “Appendix B”, . . . , begin each appendix with `\section{}`.

2.3 Displayed Text

2.3.1 Theorem-like environments

Using the `amsthm` package, we have defined the following theorem-like environments:

assumption	criterion	problem
axiom	definition	proposition
case	example	remark
claim	exercise	solution
conclusion	fact	subclaim
condition	lemma	summary
conjecture	notation	remark
convention	note	theorem
corollary	observation	

Please use these. By default, all theorem-like environments are numbered by section and sequentially in the same series. That is, Theorem 3.43 will follow Observation 3.42.

If your article requires some theorem-like environment not defined here, you may define new ones using `\newtheorem{⟨envname⟩}[⟨counter⟩]{⟨label⟩}`. For example, `\newtheorem{garbage}[theorem]{Garbage}` will define a `garbage` environment, instances of which will be numbered in sequence with the theorems.

Every theorem-like environment takes an optional argument which can be used to supply an annotation. E.g., this code

```
\begin{theorem}[Fermat]
  For integers  $n > 2$ , the equation  $a^n + b^n = c^n$ 
  has no nonzero integer solutions.
\end{theorem}
```

will produce

Theorem 2.1 (Fermat). For integers $n > 2$, the equation $a^n + b^n = c^n$ has no nonzero integer solutions.

Our standard numbering is by section. If you wish to have one numbering for the entire article (not resetting at the begin of each section), please use the command `\numberingbyarticle`. This has to be done for articles without sections, and could also be useful for other short articles. The theorem label for the above example would then read “**Theorem 1 (Fermat)**.”, assuming that there are no theorem-like environments before it.

For more advanced usage of theorem-like environments, please see the documentation for the `amsthm` package.

2.3.2 Proof environments

The `proof` and `proofof` environments may be used for enclosing proofs:

```
\begin{proof}[⟨label⟩] ... \end{proof}
\begin{proofof}[⟨label⟩]{⟨qedlabel⟩} ... \end{proofof}
```

In both cases, the optional `⟨label⟩` defaults to *Proof* if not specified. The `proofof` environment extends `proof` by offering a labelled Q.E.D. at the end of the proof.

This code:

```
\begin{proof}Omitted due to space constraints.\end{proof}
\begin{proof}[Proof of Lemma] Suppose that\ldots\end{proof}
\begin{proof}[Proof (Sketch)] The idea is that\ldots\end{proof}
\begin{proofof}{Theorem 1}Proceed by induction\ldots\end{proofof}
\begin{proofof}[Proof of Claim]{Claim}This proves the claim.\end{proofof}
```

produces the following:

Proof. Omitted due to space constraints. Q.E.D.

Proof of Lemma. Suppose that... Q.E.D.

Proof (Sketch). The idea is that... Q.E.D.

Proof. Proceed by induction... Q.E.D. (Theorem 1)

Proof of Claim. This proves the claim. Q.E.D. (Claim)

For more advanced usage of the `proof` environment, please see the documentation for the `amsthm` package.

2.4 Tables and figures

Please use the `table` and `figure` environments for your tables and figures. Tables and figures are numbered each with their own counter, which resets at the start of every article. If there are n tables and m figures in article, they will be numbered $1, \dots, n$ and $1, \dots, m$, respectively.

2.5 Replaced symbols

The symbols \emptyset , ϕ , and ϵ have been replaced by \varnothing , φ , and ε . The originals are now produced by `\origemptyset`, `\origphi`, and `\origepsilon`, respectively.

2.6 Everything else

Anything not mentioned here is unchanged usage-wise from standard L^AT_EX.

3 Implementation

This is the implementation of the `tlgart` package. It is rather ugly at present. Suggestions for improvement are welcome.

```
1
2 % zap linebreaks
3 \newcommand{\OneLine}[1]{%
4   \begingroup
5     \def\{\unskip}\space\ignorespaces}%
6     #1%
7   \endgroup}
8
9 % useful for galley proofs
10 \RequirePackage{vruler}
11 \setvruler[ ][ ][ ][ ][ ][1.5em]
12
13 %
14 % no headers on left-side pages following
15 % articles which end on right-side pages
16 %
17 \newcommand{\clearemydoublepage}%
18   {\newpage\thispagestyle{empty}\cleardoublepage}
19
20 %
21 % we get better spacing on pages this way
22 %
23 \raggedbottom
24
25 %
26 % frontmatter, mainmatter, backmatter
27 %
28 \renewcommand\frontmatter{\clearemydoublepage%
29                               \@mainmatterfalse
30                               \pagestyle{headings}
31                               \pagenumbering{arabic}}
32
33 \renewcommand\mainmatter{\clearemydoublepage%
34                               \@mainmattertrue
35                               \pagestyle{headings}}
36
37 \renewcommand\backmatter{\clearemydoublepage%
38                               \@mainmatterfalse}
39
40
41 %
42 % title header
43 %
44 \newif\iftitle
45 \renewcommand{\thanks}[1]{%
46   \iftitle{%
47     \renewcommand{\thefootnote}{\fnsymbol{footnote}}%
48     \footnote{#1}%
49     \renewcommand{\thefootnote}{\arabic{footnote}}}%
50   \else\null\fi}
```

```

51
52 \renewcommand{\title}[2]{%
53   \gdef\@title{\OneLine{#2}}
54   \gdef\@titledisplay{#2}
55   \gdef\@shorttitle{#1}
56 }
57 \def\@title{}
58 \def\@titledisplay{}
59 \def\@shorttitle{}
60
61 \newcounter{@ShowAddrLabel}
62 \setcounter{@ShowAddrLabel}{0}
63
64 \renewcommand{\author}[2]{%
65   \def\and{\unskip}\ignorespaces\ifTitle[{\protect\phantom j}\][1mm]}{\else{, }}\fi}
66   \def\addr##1{\unskip}\ignorespaces\ifTitle{${##1}$}\else\protect\setcounter{@ShowAddrLabel}{\the@ShowAddrLabel+1}\fi}
67   \gdef\@author{#2}
68   \gdef\@shortauthor{#1}
69 }
70 \def\@author{}
71 \def\@shortauthor{}
72
73 \newcounter{@addr}
74 \newcommand{\address}[1]{%
75   \setcounter{@addr}{1}
76   \gdef\@address{%
77     \ifnum\the@ShowAddrLabel >0{%
78       \def\and{\}[2mm]\stepcounter{@addr}$^{\the@addr}$\enspace\ignorespaces}
79       $^{\the@addr}$\enspace\ignorespaces #1}
80     \else{%
81       \def\and{\}[2mm]\ignorespaces}
82       #1}
83     \fi
84   }
85 }
86 \def\@address{}
87
88 \newcommand{\email}[1]{\gdef\@email{\}[1mm]\texttt{#1}}
89 \def\@email{}
90
91 \renewcommand{\maketitle}{%
92   \clearemydoublepage
93   \label{FirstPage}
94   \Titletrue
95   \refstepcounter{chapter}
96   \thispagestyle{copy}%
97   \begin{group}
98     \parindent 0pt
99     \hrulefill \linebreak \null \vspace{-8pt}\par
100     {\Large\textbf{\@titledisplay}
101
102     }
103     \vspace{5mm}
104     {\large\@author}\}[3mm]

```

```

105     \fontsize{8}{9}\selectfont\@address
106     \@email\par
107     \nobreak
108     \hrulefill \linebreak \null \vspace{-8pt}\par
109 \endgroup
110 \vspace*{10pt}
111 \@thanks
112 \setcounter{footnote}{0}
113 \Titlefalse
114 \addcontentsline{toc}{chapter}{\@title\protect\ \emph{\@author}}
115 \main
116 \renewcommand{\leftmark}{\@shortauthor}
117 \renewcommand{\rightmark}{\@shorttitle}
118 }
119
120 %
121 % copyright slug
122 %
123 \newif\ifCollection
124
125 \def\publisher#1{\gdef\@publisher{#1}}
126 \def\@publisher{}
127
128 \def\seriestitle#1{\gdef\@seriestitle{#1}}
129 \def\@seriestitle{}
130
131 \def\editor#1{\gdef\@editor{#1}}
132 \def\@editor{}
133
134 \def\volumentitle#1{\gdef\@volumentitle{#1}}
135 \def\@volumentitle{}
136
137 \def\volumentitlesep#1{\gdef\@volumentitlesep{#1}}
138 \def\@volumentitlesep{}
139
140 \def\volumesubtitle#1{\gdef\@volumesubtitle{#1}}
141 \def\@volumesubtitle{}
142
143 \def\volumeyear#1{\gdef\@volumeyear{#1}}
144 \def\@volumeyear{}
145
146 \def\volumenumber#1{\gdef\@volumenumber{#1}}
147 \def\@volumenumber{}
148
149 % FIXME: Will there ever be single-page articles? Maybe.
150
151 \def\CopyrightContent{%
152   \ifCollection{\parbox[t]{\textwidth}{%
153     \scriptsize \@editor. \textit{\@volumentitle}\@volumentitlesep}\@volumesubtitle}} \@ser
154   \else\null\fi
155 }
156
157 %
158 % running heads

```



```

159 %
160 \def\ps@copy{%
161     \def\@oddfoot{\CopyrightContent}%
162     \def\@evenfoot{\CopyrightContent}%
163     \let\@evenhead\@empty%
164     \let\@oddhead\@empty}
165
166 \def\ps@headings{%
167     \let\@oddfoot\@empty%
168     \let\@evenfoot\@empty%
169     \def\@evenhead{\Titlefalse\fontsize{8}{9}\selectfont%
170         \thepage\hfil\leftmark}%
171     \def\@oddhead{\Titlefalse\fontsize{8}{9}\selectfont%
172         \rightmark\hfil\thepage}}
173
174 \pagestyle{headings}
175
176 %
177 % theorem-like environments
178 %
179 \newtheoremstyle{tlg}%           name
180     {\topsep}%                 space above
181     {\topsep}%                 space below
182     {\rm}%                     body text
183     {}%                         indent
184     {\bfseries}%               head text
185     {.}%                       punctuation after head
186     {0.5em}%                   space after head
187     {}%                         head spec
188
189 \theoremstyle{tlg}
190
191 \newtheorem{theorem}{Theorem}[section]
192
193 \newtheorem{assumption}[theorem]{Assumption}
194 \newtheorem{axiom}[theorem]{Axiom}
195 \newtheorem{case}[theorem]{Case}
196 \newtheorem{claim}[theorem]{Claim}
197 \newtheorem{conclusion}[theorem]{Conclusion}
198 \newtheorem{condition}[theorem]{Condition}
199 \newtheorem{conjecture}[theorem]{Conjecture}
200 \newtheorem{convention}[theorem]{Convention}
201 \newtheorem{corollary}[theorem]{Corollary}
202 \newtheorem{criterion}[theorem]{Criterion}
203 \newtheorem{definition}[theorem]{Definition}
204 \newtheorem{example}[theorem]{Example}
205 \newtheorem{exercise}[theorem]{Exercise}
206 \newtheorem{fact}[theorem]{Fact}
207 \newtheorem{lemma}[theorem]{Lemma}
208 \newtheorem{notation}[theorem]{Notation}
209 \newtheorem{note}[theorem]{Note}
210 \newtheorem{observation}[theorem]{Observation}
211 \newtheorem{problem}[theorem]{Problem}
212 \newtheorem{proposition}[theorem]{Proposition}

```

```

213 \newtheorem{question}[theorem]{Question}
214 \newtheorem{remark}[theorem]{Remark}
215 \newtheorem{solution}[theorem]{Solution}
216 \newtheorem{subclaim}[theorem]{Subclaim}
217 \newtheorem{summary}[theorem]{Summary}
218
219 \renewcommand\thetheorem{\thesection.\arabic{theorem}}
220
221 \def\@removefromreset#1#2{%
222   \expandafter\let\csname c@#1\endcsname\@removefromreset
223   \def\@elt##1{%
224     \expandafter\ifx\csname c@##1\endcsname\@removefromreset
225     \else
226       \noexpand\@elt{##1}%
227     \fi}%
228   \expandafter\xdef\csname cl@#2\endcsname{%
229     \csname cl@#2\endcsname}}
230
231 \newcommand{\numberbyarticle}{%
232   \@removefromreset{theorem}{section}
233   \renewcommand\thetheorem{\arabic{theorem}}}
234
235 %
236 % proof environments
237 %
238 \renewcommand{\qedsymbol}{\footnotesize\textsc{q.e.d.}}
239 \let\origqedsymbol\qedsymbol
240
241 \newenvironment{proofof}[2][Proof]{%
242   {\begingroup
243     \renewcommand{\qedsymbol}{\footnotesize\origqedsymbol\ (#2)}}
244   \begin{proof}[#1]}
245   {\end{proof}\endgroup}
246
247 %
248 % table of contents
249 %
250 \renewcommand\contentsname{Table of Contents}
251
252 \renewcommand\tableofcontents{%
253   \clearemptydoublepage
254   \thispagestyle{empty}
255   \begingroup
256     \vspace*{1em}
257     \parindent 0pt
258     \hrulefill \linebreak \null \vspace{-8pt}\par
259     {\Large\bfseries\contentsname}
260
261   }
262   \nobreak
263   \hrulefill \linebreak \null \vspace{-8pt}\par
264 \endgroup
265 \vskip3\baselineskip
266 \@starttoc{toc}

```

```

267 \pagestyle{headings}
268 \markboth{\contentsname}{\contentsname}
269 \clearemptydoublepage
270 }
271
272 %
273 % part
274 %
275 % FIXME: add part code
276
277 %
278 % chapter
279 %
280 \def\@makechapterhead#1{%
281 \thispagestyle{empty}
282 \vspace*{1em}
283 \begingroup
284 \parindent 0pt
285 \hrulefill \linebreak \null \vspace{-8pt}\par
286 \ifnum \c@secnumdepth >\m@ne
287 \if@mainmatter
288 {\Large\bfseries \@chapapp\space \thechapter}
289
290 }
291 \fi
292 \fi
293 \interlinepenalty\@M
294 {\Large\bfseries #1}
295
296 }
297 \nobreak
298 \hrulefill \linebreak \null \vspace{-8pt}\par
299 \endgroup
300 \vskip 40\p@
301 \renewcommand{\leftmark}{\@chapapp\space \thechapter}
302 \renewcommand{\rightmark}{#1}
303 }
304
305 \def\@makeschapterhead#1{%
306 \thispagestyle{empty}
307 \vspace*{1em}
308 \begingroup
309 \parindent 0pt
310 \hrulefill \linebreak \null \vspace{-8pt}\par
311 {\Large\bfseries #1}
312
313 }
314 \nobreak
315 \hrulefill \linebreak \null \vspace{-8pt}\par
316 \endgroup
317 \vskip 40\p@
318 \renewcommand{\leftmark}{#1}
319 \renewcommand{\rightmark}{#1}
320 }

```

```

321
322 \def\l@chapter#1#2{\addpenalty{-\@highpenalty}%
323   \vskip 1.0em plus\p@
324   \@tempdima 1.5em
325   \begingroup
326     \parindent \z@ \rightskip \@pnumwidth
327     \parfillskip -\@pnumwidth
328     \leavevmode
329     #1 \dotfill #2\par
330     \penalty\@highpenalty
331   \endgroup}
332
333 %
334 % set the section numbering depth
335 %
336 \setcounter{secnumdepth}{5}
337
338 %
339 % section
340 %
341 \def\thesection{\arabic{section}} % blow away chapter numbers
342
343 \def\section{\@startsection{section}{1}{\z@}%
344               {-2ex plus -.5ex minus -.2ex}%
345               {.8ex plus .08ex}%
346               {\raggedright\large\bf}}
347 %
348 % subsection
349 %
350 \def\subsection{\@startsection{subsection}{2}{\z@}%
351               {-1.5ex plus -.25ex minus -.1ex}%
352               {.6ex plus .06ex}%
353               {\raggedright\normalsize\bf}}
354
355 %
356 % subsubsection
357 %
358 \def\subsubsection{\@startsection{subsubsection}{3}{\z@}%
359               {-1ex plus -.15ex minus -.06ex}%
360               {.4ex plus .04ex}%
361               {\raggedright\normalsize\bf}}
362
363 %
364 % paragraph
365 %
366 \def\paragraph{\@startsection{paragraph}{4}{\z@}%
367               {.5ex plus .05ex minus .025ex}%
368               {- .66em}%
369               {\normalsize\bf}}
370
371 %
372 % subparagraph
373 %
374 \def\subparagraph{\@startsection{subparagraph}{5}{\parindent}%

```

```

375                                     {.25ex plus .01ex minus .005ex}%
376                                     {- .66em}%
377                                     {\normalsize\bf}}
378
379 %
380 % appendix
381 %
382 \renewcommand\appendix{\par
383   \setcounter{section}{0}%
384   \gdef\thesection{\appendixname{} \@Alph\c@section}}
385
386 \newcommand\main{\par
387   \gdef\thesection{\@arabic\c@section}}
388
389 %
390 % tables and figures
391 %
392 %\@addtoreset{figure}{article}
393 \renewcommand\thefigure{\arabic{figure}}
394
395 %\@addtoreset{table}{article}
396 \renewcommand\thetable{\arabic{table}}
397
398 %
399 % bibliography
400 %
401 \renewcommand{\bibname}{References}
402
403 \renewenvironment{thebibliography}[1]{%
404   \vskip1cm
405   \section*{\bibname}%
406   \list{\@biblabel{\@arabic\c@enumiv}}%
407     {\settowidth\labelwidth{\@biblabel{#1}}%
408       \leftmargin\labelwidth
409       \advance\leftmargin\labelsep
410       \@openbib@code
411       \usecounter{enumiv}%
412       \let\p@enumiv\@empty
413       \renewcommand\theenumiv{\@arabic\c@enumiv}}%
414   \sloppy
415   \clubpenalty4000
416   \@clubpenalty \clubpenalty
417   \widowpenalty4000%
418   \sfcode'\.\@m}
419   {\def\@noitemerr
420     {\@latex@warning{Empty 'thebibliography' environment}}}%
421   \endlist}
422
423 %
424 % received, revised, accepted
425 %
426 \newcommand\receivedtext{%
427   \bigskip\noindent
428   \begingroup

```

```

429     \if!\@received!\else{\scriptsize Received: \@received}\[-.3em] \fi
430     \if!\@revised!\else{\scriptsize Revised: \@revised}\[-.3em] \fi
431     \if!\@accepted!\else{\scriptsize Accepted: \@accepted} \fi
432 \endgroup
433 }
434
435 \def\received#1{\gdef\@received{#1}}
436 \def\revised#1{\gdef\@revised{#1}}
437 \def\accepted#1{\gdef\@accepted{#1}}
438
439 %
440 % abstract
441 %
442 \newcommand\abstractname{Abstract}
443
444 \newenvironment{abstract}{%
445     \small
446     \begin{center}%
447         {\bfseries \abstractname\vspace{-.5em}\vspace{\z@}}%
448     \end{center}%
449     \quote}
450     {\endquote}
451
452 %
453 % caption
454 %
455 \long\def\@makecaption#1#2{%
456     \vskip 10\p@
457     \setbox\@tempboxa\hbox{\textsc{#1.} #2}%
458     \ifdim \wd\@tempboxa >\hsize
459         \textsc{#1.} #2\par
460     \else
461         \hbox to\hsize{\hfil\box\@tempboxa\hfil}%
462     \fi}
463
464 %
465 % quote, quotation
466 %
467 \renewenvironment{quotation}%
468     {\list{}}%
469     {\listparindent 1.5em%
470     \itemindent \listparindent
471     \rightmargin \leftmargin
472     \parsep \z@ \@plus\p@}%
473     \small%
474     \item\relax}%
475     {\endlist}
476 \renewenvironment{quote}%
477     {\list{}}%
478     {\rightmargin\leftmargin}%
479     \small%
480     \item\relax}%
481     {\endlist}
482

```

```

483 %
484 % lists
485 %
486 \renewcommand{\labelitemi}{\small\textbullet}
487
488 %
489 % footnotes
490 %
491 \newdimen\fnindent
492 \fnindent1em
493
494 \long\def\@makefnmark#1{%
495   \parindent \fnindent%
496   \leftskip \fnindent%
497   \noindent
498   \llap{\hb@xt@1em{\hss\@makefnmark\ }}\ignorespaces#1}
499
500 %
501 % various characters for which the defaults are ugly
502 %
503 \let\origemptyset\emptyset
504 \let\emptyset\varnothing
505 \let\origphi\phi
506 \let\phi\varphi
507 \let\origepsilon\epsilon
508 \let\epsilon\ varepsilon
509

```

The End.