`mobile.sty`: A Syntax for LaTeX Authoring on Mobile Devices

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Abstract

This package provides convenient shorthands for fast and easy authoring of LaTeX documents on mobile devices. Given a highly limited default keyboard, the package builds on the alphanumeric latin letters, the dot and regular paranthesis, as its main building blocks. While modern smartphone devices provide a variety of altnerative keyboards via a (combination of) function keys, that proves slow and error-prone in practice. The dot and paranthesis notation outlined below aims to circumvent that issues.

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1 Introduction

With the advent of mobile devices, the young typesetter has often felt the frustration of the inability to quickly and reliably author high quality texts, be it scientific, professional or fictional, on their otherwise very high capacity smartphones.

The `mobile` package tailors to this need. The heart of the project is to use the 29 symbols on a default smartphone keyboard as a basis for a typesetting kernel, capturing as big a subset as possible of LaTeX's original capabilities.

2 User Interface

The user interface tries to stay true to the classic LaTeX authoring feeling, remapping the escape symbol backslash(\) to dot(.).

Thus, an example document might be created as shown in Figure 1.

```
\documentclass{article}
\usepackage{mobile}

.begin(document)

An example follows.

.begin(itemize)

.item The probability of getting .m.(k.).m heads when flipping .m.(n.).m coins is:
.mm P.(E.) = (n .choose k) p.sup(k) .(1.minus p.).sup(n .minus k) .mm

.end(itemize)

.end(document)
```

Figure 1: Example use of `\mobile`

Below, we outline the full list of shorthands we have enabled thus far. Note that the original LaTeX syntax remains functional, thus keeping the `mobile` package compatible with any other LaTeX package, and allowing the user to flexibly decide on which notation to use, as well as to co-author documents with a variety of devices.

3 Exhaustive Feature List

4 Implementation

We proceed to doing the actual work on the LaTeX side of affairs.

To start things off, we create a variety of shorthands to symbols typically accessbile on a computer keyboard, but hard to use on a mobile device.

```
⟨*package⟩
\edef\ {. }
\def\m{$ }
\def\mm{$$ }
\def\minus{-}
\def\plus{+}
\def\eq{=}
\def\at{@}
\def\comment{\%}
\def\sub{_}
\def\sup{^}
\edef\d{(}
\edef\b{)}
\def\bb{\b\b}
\def\dd{\d\d}
⟨/package⟩
```

Lastly, we reassign the respective catcodes, in order to make dot and paranthesis active.

```
⟨*package⟩
\catcode`\.=0
\catcode`\(=1%
\catcode`\)=2%
\let\(\d
\let\)\b
⟨/package⟩
```