

The **telprint** package

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Abstract

Package **telprint** provides `\telprint` for formatting German phone numbers.

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1 Documentation

1.1 Introduction

This is a very old package that I have written to format phone numbers. It follows German conventions and the documentation is mainly in German.

1.2 Short overview in English

L^AT_EX:

```
\usepackage{telprint}
\telprint{123/456-789}
```

plain-T_EX:

```
\input telprint.sty
\telprint{123/456-789}
```

\telprint **\telprint{...}** formats the explicitly given number. Digits, spaces and some special characters ('+', '/', '-', '(', ')', '~', ' ') are supported. Numbers are divided into groups of two digits from the right. Examples:

```
\telprint{0761/12345}      ==> 07\,61/1\,23\,45
\telprint{01234/567-89}    ==> 0\,12\,34/5\,67\leavevmode\hbox{-}89
\telprint{+49 (6221) 297}  ==> +49~(62\,21)~2\,97
```

1.2.1 Configuration

The output of the symbols can be configured by **\telhyphen**, **\telslash**, **\telleftparen**, **\telrightparen**, **\telplus**, **\teltilde**. Example:

```
\telslash{\,/\,}\telprint{12/34} ==> 12\,/\/,34
```

\telspace **\telspace** configures the space between digit groups.
\telnumber **\telnumber** only formats a number in digit groups; special characters are not recognized.

1.3 Documentation in German

\telprint • **telprint#1**
Der eigentliche Anwenderbefehl zur formatierten Ausgabe von Telefonnummern. Diese dürfen dabei nur als Zahlen angegeben werden (da sie tokenweise analysiert werden). Als Trenn- oder Sonderzeichen werden unterstützt: '+', '/', '-', '(', ')', '~', ' '. Einfache Leerzeichen werden erkannt und durch Tilden ersetzt, um Trennungen in der Telefonnummer zu verhindern. (Man beachte aus gleichem Grunde die **\hbox** bei '-'). Beispiele:

```
\telprint{0761/12345}      ==> 07\,61/1\,23\,45
\telprint{01234/567-89}    ==> 0\,12\,34/5\,67\leavevmode\hbox{-}89
\telprint{+49 (6221) 297}  ==> +49~(62\,21)~2\,97
```

Der Rest enthält eher Technisches:

\telspace • **\telspace#1**
Mit diesem Befehl wird der Abstand zwischen den Zifferngruppen angegeben (Default: \,). (Durch **\telspace{}** kann dieser zusätzliche Abstand abgestellt werden.)

<code>\telhyphen</code>	<ul style="list-style-type: none"> • <code>\telhyphen#1</code> Dieser Befehl gibt die Art des Bindestriches, wie er ausgegeben werden soll. In der Eingabe darf jedoch nur der einfache Bindestrich stehen: <code>\telprint{123-45}</code>, jedoch NIE <code>\telprint{123--45}</code>! Kopka-Bindestrich-Fans geben an: <code>\telhyphen{\leavevmode\hbox{--}}</code>
<code>\telslash</code>	<ul style="list-style-type: none"> • <code>\telslash#1, \telleftparen#1, \telrightparen#1, \telplus#1, \teltilde</code> Diese Befehle konfigurieren die Zeichen <code>'/'</code>, <code>'('</code>, <code>')'</code>, <code>'+'</code> und <code>'~'</code>. Sie funktionieren analog zu <code>\telhyphen</code>. • <code>\telnumber#1</code> Richtung interner Befehl: Er dient dazu, eine Zifferngruppe in Zweiergruppen auszugeben. Die einzelnen Zahlen werden im Tokenregister <code>\TELtoks</code> gespeichert. Abwechselnd werden dabei zwischen zwei Token (Zahlen) <code>\TELx</code> bzw. <code>\TELy</code> eingefügt, abhängig von dem wechselnden Wert von <code>\TELswitch</code>. Zum Schluss kann dann einfach festgestellt werden ob die Nummer nun eine geradzahlige oder ungeradzahlige Zahl von Ziffern aufwies. Dem entsprechend wird <code>\TELx</code> mit dem Zusatzabstand belegt und <code>\TELy</code> leer definiert oder umgekehrt.) • <code>\TEL...</code> interne Befehle, Technisches: <code>\TELsplit</code> dient zur Aufteilung einer zusammengesetzten Telefonnummer (Vorwahl, Hauptnummer, Nebenstelle). In dieser Implementation werden als Trennzeichen nur <code>'/'</code> und <code>'-'</code> erkannt. Die einzelnen Bestandteile wie Vorwahl werden dann dem Befehl <code>\telnumber</code> zur Formatierung uebergeben. • Die Erkennung von einfachen Leerzeichen ist um einiges schwieriger: Die Tokenentrennung ueber Parameter <code>#1#2</code> funktioniert nicht für einfache Leerzeichen, da TeX sie <i>niemals</i> als eigenständige Argumente behandelt! (The TeXbook, Chapter 20, p. 201) (Anmerkung am Rande: Deshalb funktionieren die entsprechenden Tokenmakros auf S. 149 des Buches „Einführung in TeX“ von N. Schwarz (3. Aufl.) nicht, wenn im Tokenregister als erstes ein einfaches Leerzeichen steht!)
<code>\telleftparen</code>	
<code>\telrightparen</code>	
<code>\telplus</code>	
<code>\teltilde</code>	
<code>\telnumber</code>	

2 Implementation

```
1 (*package)
```

2.1 Reload check and package identification

Reload check, especially if the package is not used with L^AT_EX.

```

2 \begingroup
3 \catcode44 12 % ,
4 \catcode45 12 % -
5 \catcode46 12 % .
6 \catcode58 12 % :
7 \catcode64 11 % @
8 \expandafter\let\expandafter\x\csname ver@telprint.sty\endcsname
9 \ifcase 0%
10 \ifx\x\relax % plain
11 \else
12 \ifx\x\empty % LaTeX
13 \else
14 1%
15 \fi
16 \fi
17 \else
18 \expandafter\ifx\csname PackageInfo\endcsname\relax
19 \def\x#1#2{%
20 \immediate\write-1{Package #1 Info: #2.}%

```

```

21     }%
22     \else
23         \def\x#1#2{\PackageInfo{#1}{#2, stopped}}%
24     \fi
25     \x{telprint}{The package is already loaded}%
26     \endgroup
27     \expandafter\endinput
28 \fi
29 \endgroup

```

Package identification:

```

30 \begingroup
31 \catcode40 12 % (
32 \catcode41 12 % )
33 \catcode44 12 % ,
34 \catcode45 12 % -
35 \catcode46 12 % .
36 \catcode47 12 % /
37 \catcode58 12 % :
38 \catcode64 11 % @
39 \expandafter\ifx\csname ProvidesPackage\endcsname\relax
40     \def\x#1#2#3[#4]{\endgroup
41         \immediate\write-1{Package: #3 #4}%
42         \xdef#1{#4}%
43     }%
44 \else
45     \def\x#1#2[#3]{\endgroup
46         #2[#3]}%
47     \ifx#1\relax
48         \xdef#1{#3}%
49     \fi
50 }%
51 \fi
52 \expandafter\x\csname ver@telprint.sty\endcsname
53 \ProvidesPackage{telprint}%
54 [2007/09/09 v1.9 Formatting of German phone numbers (HO)]

```

2.2 Catcodes

```

55 \expandafter\edef\csname TELAtEnd\endcsname{%
56     \catcode64 \the\catcode64\relax
57 }
58 \catcode64 11 % @
59 \def\TMP@EnsureCode#1#2{%
60     \edef\TELAtEnd{%
61         \TELAtEnd
62         \catcode#1 \the\catcode#1\relax
63     }%
64     \catcode#1 #2\relax
65 }
66 \TMP@EnsureCode{33}{12}% !
67 \TMP@EnsureCode{36}{3}% $
68 \TMP@EnsureCode{40}{12}% (
69 \TMP@EnsureCode{41}{12}% )
70 \TMP@EnsureCode{42}{12}% *
71 \TMP@EnsureCode{43}{12}% +
72 \TMP@EnsureCode{44}{12}% ,
73 \TMP@EnsureCode{45}{12}% -
74 \TMP@EnsureCode{46}{12}% .
75 \TMP@EnsureCode{47}{12}% /
76 \TMP@EnsureCode{61}{12}% =
77 \TMP@EnsureCode{126}{13}% ~ (active)

```

2.3 Package macros

```

78 \ifx\DeclareRobustCommand\UnDeFiNeD
79   \def\DeclareRobustCommand*#1[1]{\def#1##1}%
80   \def\TELreset{\let\DeclareRobustCommand=\UnDeFiNeD}%
81   \input infwarerr.sty\relax
82   \@PackageInfo{telprint}{%
83     Macros are not robust!%
84   }%
85 \else
86   \let\TELreset=\relax
87 \fi

\telspace

88 \DeclareRobustCommand*{\telspace}[1]{\def\TELspace{#1}}
89 \telspace{ }$ , $ }

\telhyphen

90 \DeclareRobustCommand*{\telhyphen}[1]{\def\TELhyphen{#1}}
91 \telhyphen{\leavevmode\hbox{-}}% \hbox zur Verhinderung der Trennung

\telslash

92 \DeclareRobustCommand*{\telslash}[1]{\def\TELslash{#1}}
93 \telslash{/}%

\telleftparen

94 \DeclareRobustCommand*{\telleftparen}[1]{\def\TELleftparen{#1}}
95 \telleftparen{ }%

\telrightparen

96 \DeclareRobustCommand*{\telrightparen}[1]{\def\TELrightparen{#1}}
97 \telrightparen{ }%

\telplus

98 \DeclareRobustCommand*{\telplus}[1]{\def\TELplus{#1}}
99 \telplus{+}%

\teltilde

100 \DeclareRobustCommand*{\teltilde}[1]{\def\TELtilde{#1}}
101 \teltilde{~}%

\TELtoks

102 \newtoks\TELtoks

\TELnumber

103 \def\TELnumber#1#2\TELnumberEND{%
104   \begingroup
105   \def\0{#2}%
106   \expandafter\endgroup
107   \ifx\0\empty
108     \TELtoks=\expandafter{\the\TELtoks#1}%
109     \ifnum\TELswitch=0 %
110       \def\TELx{\TELspace}\def\TELy{ }%
111     \else
112       \def\TELx{ }\def\TELy{\TELspace}%
113     \fi
114     \the\TELtoks
115   \else
116     \ifnum\TELswitch=0 %
117       \TELtoks=\expandafter{\the\TELtoks#1\TELx}%
118       \def\TELswitch{1}%

```

```

119     \else
120         \TELToks=\expandafter{\the\TELToks#1\TELy}%
121         \def\TELswitch{0}%
122     \fi
123     \TELnumber#2\TELnumberEND
124 \fi
125 }

\telnumber

126 \DeclareRobustCommand*{\telnumber}[1]{%
127     \TELToks={}%
128     \def\TELswitch{0}%
129     \TELnumber#1{}\TELnumberEND
130 }

\TELsplit

131 \def\TELsplit{\futurelet\TELfuture\TELdosplit}

\TELdosplit

132 \def\TELdosplit#1#2\TELsplitEND
133 {%
134     \def\TELsp{ }%
135     \expandafter\ifx\TELsp\TELfuture
136         \let\TELfuture=\relax
137         \expandafter\telnumber\expandafter{\the\TELToks}~%
138         \telprint{#1#2}% Das Leerzeichen kann nicht #1 sein!
139     \else
140         \def\TELfirst{#1}%
141         \ifx\TELfirst\empty
142             \expandafter\telnumber\expandafter{\the\TELToks}%
143             \TELToks={}%
144         \else\if-\TELfirst
145             \expandafter\telnumber\expandafter{\the\TELToks}\TELhyphen
146             \telprint{#2}%
147         \else\if/\TELfirst
148             \expandafter\telnumber\expandafter{\the\TELToks}\TELSlash
149             \telprint{#2}%
150         \else\if\TELfirst
151             \expandafter\telnumber\expandafter{\the\TELToks}\TELleftparen
152             \telprint{#2}%
153         \else\if)\TELfirst
154             \expandafter\telnumber\expandafter{\the\TELToks}\TELrightparen
155             \telprint{#2}%
156         \else\if+\TELfirst
157             \expandafter\telnumber\expandafter{\the\TELToks}\TELplus
158             \telprint{#2}%
159         \else\def\TELtemp{~}\ifx\TELtemp\TELfirst
160             \expandafter\telnumber\expandafter{\the\TELToks}\TELtilde
161             \telprint{#2}%
162         \else
163             \TELToks=\expandafter{\the\TELToks#1}%
164             \TELsplit#2{}\TELsplitEND
165             \fi\fi\fi\fi\fi\fi\fi
166     \fi
167 }

\telprint

168 \DeclareRobustCommand*{\telprint}[1]{%
169     \TELToks={}%
170     \TELsplit#1{}\TELsplitEND
171 }

```

```

172 \TELreset\let\TELreset=\UnDeFiNeD
173 \TELEnd
174 \endpackage

```

3 Test

3.1 Catcode checks for loading

```

175 \testl
176 \catcode'\@=11 %
177 \def\RestoreCatcodes{
178 \count@=0 %
179 \loop
180 \edef\RestoreCatcodes{%
181 \RestoreCatcodes
182 \catcode\the\count@=\the\catcode\count@\relax
183 }%
184 \ifnum\count@<255 %
185 \advance\count@\@ne
186 \repeat
187
188 \def\RangeCatcodeInvalid#1#2{%
189 \count@=#1\relax
190 \loop
191 \catcode\count@=15 %
192 \ifnum\count@<#2\relax
193 \advance\count@\@ne
194 \repeat
195 }
196 \def\Test{%
197 \RangeCatcodeInvalid{0}{47}%
198 \RangeCatcodeInvalid{58}{64}%
199 \RangeCatcodeInvalid{91}{96}%
200 \RangeCatcodeInvalid{123}{255}%
201 \catcode'\@=12 %
202 \catcode'\=0 %
203 \catcode'\{=1 %
204 \catcode'\}=2 %
205 \catcode'\#=6 %
206 \catcode'\[=12 %
207 \catcode'\]=12 %
208 \catcode'\%=14 %
209 \catcode'\ =10 %
210 \catcode13=5 %
211 \input telprint.sty\relax
212 \RestoreCatcodes
213 }
214 \Test
215 \csname @@end\endcsname
216 \end
217 \testl

```

4 Installation

4.1 Download

Package. This package is available on CTAN¹:

[CTAN:macros/latex/contrib/oberdiek/telprint.dtx](http://ctan.org/macros/latex/contrib/oberdiek/telprint.dtx) The source file.

¹[ftp://ftp.ctan.org/tex-archive/](http://ftp.ctan.org/tex-archive/)

[CTAN:macros/latex/contrib/oberdiek/telprint.pdf](#) Documentation.

Bundle. All the packages of the bundle ‘oberdiek’ are also available in a TDS compliant ZIP archive. There the packages are already unpacked and the documentation files are generated. The files and directories obey the TDS standard.

[CTAN:macros/latex/contrib/oberdiek/oberdiek-tds.zip](#)

TDS refers to the standard “A Directory Structure for T_EX Files” ([CTAN:tds/tds.pdf](#)). Directories with `texmf` in their name are usually organized this way.

4.2 Bundle installation

Unpacking. Unpack the `oberdiek-tds.zip` in the TDS tree (also known as `texmf` tree) of your choice. Example (linux):

```
unzip oberdiek-tds.zip -d ~/texmf
```

Script installation. Check the directory `TDS:scripts/oberdiek/` for scripts that need further installation steps. Package `attachfile2` comes with the Perl script `pdfatfi.pl` that should be installed in such a way that it can be called as `pdfatfi`. Example (linux):

```
chmod +x scripts/oberdiek/pdfatfi.pl
cp scripts/oberdiek/pdfatfi.pl /usr/local/bin/
```

4.3 Package installation

Unpacking. The `.dtx` file is a self-extracting `docstrip` archive. The files are extracted by running the `.dtx` through plain-T_EX:

```
tex telprint.dtx
```

TDS. Now the different files must be moved into the different directories in your installation TDS tree (also known as `texmf` tree):

<code>telprint.sty</code>	→ <code>tex/generic/oberdiek/telprint.sty</code>
<code>telprint.pdf</code>	→ <code>doc/latex/oberdiek/telprint.pdf</code>
<code>telprint-test1.tex</code>	→ <code>doc/latex/oberdiek/telprint-test1.tex</code>
<code>telprint.dtx</code>	→ <code>source/latex/oberdiek/telprint.dtx</code>

If you have a `docstrip.cfg` that configures and enables `docstrip`’s TDS installing feature, then some files can already be in the right place, see the documentation of `docstrip`.

4.4 Refresh file name databases

If your T_EX distribution (teT_EX, miK_TE_X, ...) relies on file name databases, you must refresh these. For example, teT_EX users run `texhash` or `mktextlsr`.

4.5 Some details for the interested

Attached source. The PDF documentation on CTAN also includes the `.dtx` source file. It can be extracted by AcrobatReader 6 or higher. Another option is `pdftk`, e.g. unpack the file into the current directory:

```
pdftk telprint.pdf unpack_files output .
```


Unpacking with \LaTeX . The `.dtx` chooses its action depending on the format:

plain- \TeX : Run `docstrip` and extract the files.

\LaTeX : Generate the documentation.

If you insist on using \LaTeX for `docstrip` (really, `docstrip` does not need \LaTeX), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{telprint.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

Generating the documentation. You can use both the `.dtx` or the `.drv` to generate the documentation. The process can be configured by the configuration file `ltxdoc.cfg`. For instance, put this line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with pdf \LaTeX :

```
pdflatex telprint.dtx
makeindex -s gind.ist telprint.idx
pdflatex telprint.dtx
makeindex -s gind.ist telprint.idx
pdflatex telprint.dtx
```

5 History

[1996/11/28 v1.0]

- Erste lauffähige Version.
- Nur `' '` und `'/'` als zulässige Sonderzeichen.

[1997/09/16 v1.1]

- Dokumentation und Kommentare (Posting in `de.comp.text.tex`).
- Erweiterung um Sonderzeichen `'(, ')`, `'+'`, `'~'` und `' '`.
- Trennungsverhinderung am `'hyphen'`.

[1997/10/16 v1.2]

- Schutz vor wiederholtem Einlesen.
- Unter $\LaTeX 2_{\epsilon}$ Nutzung des `\DeclareRobustCommand`-Features.

[1997/12/09 v1.3]

- Temporäre Variable eingespart.

[2004/11/02 v1.4]

- Fehler in der Dokumentation korrigiert.

[2005/09/30 v1.5]

- Konfigurierbare Symbole: `'/'`, `'(, ')`, `'+'` und `'~'`.

[2006/02/12 v1.6]

- LPPL 1.3.
- Kurze Übersicht in Englisch.
- CTAN.

[2006/08/26 v1.7]

- New DTX framework.

[2007/04/11 v1.8]

- Line ends sanitized.

[2007/09/09 v1.9]

- Catcode section added.
- Missing docstrip tag added.

6 Index

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