# hyph-utf8 

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#### Abstract

The hyph-utf8 package gathers all the existing hyphenation patterns for $\mathrm{T}_{\mathrm{E}} \mathrm{X}$, converted to UTF-8. They can be used directly by UTF-8-aware $\mathrm{T}_{\mathrm{E}} \mathrm{X}$ engines such as LuaTEX and $\mathrm{X}_{\mathrm{F}} \mathrm{T}_{\mathrm{E}} \mathrm{X}$, and there is a mechanism to convert the patterns to some 8-bit encoding when used with pdfTEX or Knuth's $\mathrm{T}_{\mathrm{E}} \mathrm{X}$.


## List of supported languages

| English |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| - | english | usenglish, USenglish, american |  |  |
| en-us | usenglishmax |  |  |  |
| en-gb | ukenglish | british, UKenglish |  |  |
| Afrikaans af | afrikaans | Esperanto eo | esperanto |  |
| Ancientgreek |  | Estonian |  |  |
| grc | ancientgreek | et | estonian |  |
| grc-x-ibycus | ibycus | Ethiopic |  |  |
| Arabic ar | arabic | mul-ethi <br> Farsi | ethiopic | amharic, geez |
| Armenian hy | armenian | fa <br> Finnish | farsi | persian |
| Assamese |  | fi | finnish |  |
| as | assamese | French |  |  |
| Basque |  | fr | french | patois, francais |
| eu | basque | Friulan |  |  |
| Bengali bn |  | fur | friulan | furlan |
|  | bengali | Galician |  |  |
| Bulgarian bg |  | gl | galician |  |
|  | bulgarian | German |  |  |
| Catalanca |  | de-1901 | german |  |
|  | catalan | de-1996 | ngerman |  |
| Chinese |  | de-ch-1901 | suissgerman |  |
| zh-latn-pinyin | pinyin | Greek |  |  |
| Coptic |  | el-monoton el-polyton | monogreek greek | polygreek |
| Croatian |  | Gujarati |  |  |
| hr | croatian | gu | gujarati |  |
| Czech |  | Hindi |  |  |
| cs | czech | hi | hindi |  |
| Danish |  | Hungarian |  |  |
| da | danish | hu | hungarian |  |
| Dutch | dutch | Icelandic | icelandic |  |


| Indonesian id | indonesian |  | Portuguese pt | portuguese | portuges |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Interlingua |  |  | Romanian |  |  |
| ia | interlingua |  | ro | romanian |  |
| Irish |  |  | Romansh |  |  |
| ga | irish |  | rm | romansh |  |
| Italian |  |  | Russian |  |  |
| it | italian |  | ru | russian |  |
| Kannada |  |  | Sanskrit |  |  |
| kn | kannada |  | sa | sanskrit |  |
| Kurmanji |  |  | Serbian |  |  |
| kmr | kurmanji |  | sr-latn | serbian |  |
| Lao |  |  | sr-cyrl | serbianc |  |
| lo | lao |  | Slovak |  |  |
| Latin |  |  | sk | slovak |  |
| la | latin |  | Slovenian |  |  |
| Latvian |  |  | sl | slovenian | slovene |
| lv | latvian |  | Spanish |  |  |
| Lithuanian |  |  | es | spanish | espanol |
| lt | lithuanian |  | Suedish |  |  |
| Malayalam |  |  | sv | swedish |  |
| ml | malayalam |  | Tamil |  |  |
| Marathi |  |  | ta | tamil |  |
| mr | marathi |  | Telugu |  |  |
| Mongolian |  |  | te | telugu |  |
| mn-cyrl | mongolian |  | Turkish |  |  |
| mn-cyrl-x-lmc | mongolianlmc |  | tr | turkish |  |
| Norwegian |  |  | Turkmen |  |  |
| nb | bokmal | norwegian, norsk | tk | turkmen |  |
| nn | nynorsk |  | Ukrainian |  |  |
| Oriya |  |  | uk | ukrainian |  |
| or | oriya |  | Uppersorbian |  |  |
| Panjabi |  |  | hsb | uppersorbian |  |
| pa | panjabi |  | Welsh |  |  |
| Polish |  |  | cy | welsh |  |
| pl | polish |  |  |  |  |

## Using hyphenation patterns

## Plain TEX

In engines that support $\varepsilon-T_{E} X$ you can select the desired hyphenation patterns with:
\uselanguage\{langname\}
where langname is the string identifying a particular hyphenation file in language. dat and can be taken from table on the first two pages.

## LTEX

Since Babel's hyphen. cfg is built in the XeLTTEXformat, hyphenation patterns can be used without even loading Babel or Polyglossia. At the low-level this simply corresponds to defining

```
\language=\l@<langname>
```

The user command is supposed to be
\hyphenrules\{langname\}
or

```
\begin{hyphenrules}{langname} ... \end{hyphenrules}.
```

and should work with any flavour of $\mathrm{LT}_{\mathrm{E}} \mathrm{X}$, however we couldn't make it work.

## LTTEX with Babel

You can use Babel with any hrm{T}_{\mathrm{E}}X\)engine,howeveritiscurrentlyunmaintainedandhasneverbeenadaptedtoworkwellwithUnicodeengines.Ifyouareusing$\mathrm{X}_{\mathrm{G}}\mathrm{T}\mathrm{EX}$pleaseusePolyglossiainstead.\usepackage[languagename]\{babel\}undefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefined

## ${ }^{\mathrm{L}} \mathrm{T}_{\mathrm{E}} \mathrm{X}$ with Polyglossia

Polyglossia should be the preferred choice when using $\mathrm{XeLL}^{4} \mathrm{E}_{\mathrm{E}} \mathrm{X}$. It doesn't support LuaLT${ }^{\mathrm{A}} \mathrm{X}$ yet, but it is planned to extend it in future.

```
\usepackage{polyglossia}
\setmainlanguage[optional settings]{langname}
\setotherlanguages{otherlangname}
\begin[optional settings]{otherlangname} ... \end{otherlangname}
```

See Polyglossia manual for extensive list of options.

## ConTEXt

ConTeXt doesn't load patterns for all the language that hyph-utf8 provides. If you miss any language, please contact the mailing list. The general syntax for supported languages is the following:

```
% language of the main document
\mainlanguage[language]
```

$\{\backslash l a n g u a g e[o t h e r l a n g u a g e] ~ l a n g u a g e ~ o f ~ s o m e ~ s h o r t ~ f r a g m e n t\} ~$
You can use full language name or language code. When using ConTEXt MKII you might need to select the appropriate font encoding for Cyrillic scripts, Polish and some other languages:

```
\usetypescript[iwona][qx]
\setupbodyfont[iwona]
\mainlanguage[polish]
```

ConTEXt loads hyphenation patterns in several encodings, so that you can for example use Czech patterns with either ec or il2 font encodings. The right hyphenation patterns will be chosen based on current font encoding.

## More examples

## Example for Polyglossia

```
\usepackage{polyglossia}
% the language used for main document
\setmainlanguage{asturian}
% American English with extended hyphenation patterns
\setotherlanguage[variant=usmax] {english}
% German with experimental patterns "ngerman-x-latest"
\setotherlanguage[spelling=new,latesthyphen=true] {german}
\setotherlanguages{spanish,catalan,french}
```

\begin\{document\} }
Long Asturian text ... (Hyphenation for Asturian is not available, but polyglossia automatically
falls back on Catalan for now, which seems to be a reasonable choice.)
\begin\{german\} }
Deutscher Text ... (with the hyphenation patterns selected above: "ngerman-x-latest")
\end\{german\} }
\begin[script=fraktur, spelling=old] \{german\}
Deutfcher Text ... (set in Fraktur, with traditional hyphenation).
\end\{german\} }
\end\{document\} }

