Babel support for the German language (pre-1996 orthography)

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Abstract

This manual documents babel language support for German (pre-1996 orthography), including support for the Austrian and Swiss (standard) varieties of German. The manual is part of the babel-german bundle.

1 Aim and usage

The babel 'language definition file' `germanb.ldf` documented in this manual provides the babel package with all language specific strings, settings and commands needed for writing German texts, including texts in the Austrian and Swiss (standard) varieties of German, in *traditional (1901–1996) spelling*.[1] As for support for contemporary ('reformed', i. e., post-1996) German orthography, please refer to the complementary manual for the `ngermanb.ldf` language definition file. The 'language definition file' also assures that the correct hyphenation patterns for the respective language or variety are used (see sec. 3 for details).

In order to use the language definitions provided here, you need to use the babel package and pass the respective language/variety name as an option, either of

- `\usepackage[german]{babel}`
- `\usepackage[austrian]{babel}`
- `\usepackage[swissgerman]{babel}`
- `\usepackage[swissgerman.toss]{babel}`[2] (New feature in v. 2.10!)

Using multiple varieties in parallel is possible; consult the babel manual [2] for details.

2 Shorthands

For all three varieties of German, the character `"` is made active in order to provide some shorthand macros. Some of these shorthands address a peculiarity of pre-1996

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[1] The file `germanb.ldf` started as a re-implementation of the package `german.sty` (v. 2.5b), which was originally developed by Hubert Partl (cf. [4]) and later maintained by Bernd Raichle (cf. [5]). Johannes Braams did the initial re-implementation.

[2] See sec. 4 on the `toss` modifier.

German spelling: consonantial character combinations that change in the context of hyphenations. Other shorthands are provided for frequently used special characters as well as for better control of hyphenation, line breaks and ligatures.

Table 1 provides an overview of the shorthands that are provided by babel-german for `german`, `austrian` and `swissgerman`.

Table 1: Shorthands provided by `germanb.ldf`

	`"a`	Umlaut ⟨ä⟩ (shorthand for `\"a`). Similar shorthands are available for all other lower- and uppercase vowels (umlauts: `"a`, `"o`, `"u`, `"A`, `"O`, `"U`; tremata: `"e`, `"i`, `"E`, `"I`).
	`"s`	German ⟨ß⟩ (shorthand for `\ss{}`); but cf. sec. 4.
	`"z`	German ⟨ß⟩ (shorthand for `\ss{}`). The difference to `"s` is the uppercase version; but cf. sec. 4.
	`"ck`	⟨ck⟩, hyphenated as ⟨k-k⟩.
	`"ff`	⟨ff⟩, hyphenated as ⟨ff-f⟩; this is also implemented for ⟨l⟩, ⟨m⟩, ⟨n⟩, ⟨p⟩, ⟨r⟩ and ⟨t⟩. Please refer to sec. 4 for why this does not include ⟨s⟩.
	`"S`	`\uppercase{"s}`, typeset as ⟨SS⟩ (⟨ß⟩ must be written as ⟨SS⟩ [or ⟨SZ⟩, see below] in uppercase writing).
	`"Z`	`\uppercase{"z}`, typeset as ⟨SZ⟩ (⟨ß⟩ must be written as ⟨SZ⟩ [or ⟨SS⟩, see above] in uppercase writing).
	`"|`	Disable ligature at this position (e. g., at morpheme boundaries, as in `Auf"|lage`).
	`"-`	An additional breakpoint that does still allow for hyphenation at the breakpoints preset in the hyphenation patterns (as opposed to `\-`).
	`"=`	An explicit hyphen with a breakpoint, allowing for hyphenation at the other points preset in the hyphenation patterns (as opposed to plain `-`); useful for long compounds such as `IT"=Dienstleisterinnen`.
	`"~`	An explicit hyphen without a breakpoint. Useful for cases where the hyphen should stick at the following syllable, e. g., `bergauf und "~ab` .
	`""`	A breakpoint that does not output a hyphen if the line break is performed (consider parenthetical extensions as in `(pseudo"~)""wissenschaftlich`).
New feature in v. 2.9!	`"/`	A slash that allows for a linebreak. As opposed to `\slash{}`, hyphenation at the breakpoints preset in the hyphenation patterns is still allowed.
New feature in v. 2.14!	`"*`	An asterisk which assures the word can still be hyphenated at its defined breakpoints. Useful if you want to employ gender-sensitive writing (‚gender star‘). Similar shorthands are available for the alternative gender-sensitive spellings, `":` and `"_`.
New feature in v. 2.14!	`"x`	Inserts a gender mark which assures the word can still be hyphenated at its defined breakpoints. This is predefined to ∗ but can be globally redefined by redefining the macro `\def\mkgender{*}`.
	`"‘`	German left double quotes ⟨„⟩.
	`"’`	German right double quotes ⟨“⟩.
	`"<`	French/Swiss left double quotes ⟨«⟩.
	`">`	French/Swiss right double quotes ⟨»⟩.

Table 2 lists some babel macros for quotation marks that might be used as an alternative to the quotation mark shorthands listed above.

3 Hyphenation patterns

The question which hyphenation patterns are used by Babel in case of the varieties of German needs some elaboration. There is a set of established hyphenation patterns for pre- and post-1996 German orthography that has been available with TEX distributions

Table 2: Alternative commands for quotation marks (provided by babel)

`\glqq`	German left double quotes ⟨„⟩.
`\grqq`	German right double quotes ⟨“⟩.
`\glq`	German left single quotes ⟨‚⟩.
`\grq`	German right single quotes ⟨‘⟩.
`\flqq`	French/Swiss left double quotes ⟨«⟩.
`\frqq`	French/Swiss right double quotes ⟨»⟩.
`\flq`	French/Swiss left single quotes ⟨‹⟩.
`\frq`	French/Swiss right single quotes ⟨›⟩.
`\dq`	The straight quotation mark character ⟨"⟩.

for a long time (currently, these are shipped in form of the `dehypht` and `dehyphn` files). These patterns, though, have many flaws (they produce wrong hyphenations, and not much is known about their construction). Therefore, a group of people developed completely new patterns that do much better, the so-called ‘experimental’ new hyphenation patterns of German, distributed in the dehyph-exptl package [3]. As opposed to the old patterns, the new ones undergo constant improvement. The price for this, however, is that hyphenation and thus the typeset document is subject to change with, and only due to, pattern updates.

Modern engines (i. e., `xetex` and `luatex`) have already embraced those new patterns, i. e., they are activated on these engines by default. The classic TEX engines (`tex`/`pdftex`), however, haven’t: they continue to use the old patterns. The reason for this is one of TEX’s quality standards: refrain, if ever possible, from changing the output of user’s documents in the wake of software updates. An exception is (pre-1996) Swiss Standard German: here, the classic engines use the ‘experimental’ patterns by default (since there were no patterns available previously anyway).

So you need to explicitly activate the new patterns for a given document (except for `swissgerman`) with the classic engines, should you want to use them instead of the old ones. With Babel, this can be done easily by means of the `\babelprovide` command and the hyphenrules option:

```
\babelprovide[hyphenrules=german-x-latest]{german}
```

For `austrian`, use a respectively adapted version of the above.

4 Variety-specific options

New feature in v. 2.10!

In Swiss (and Liechtensteinian) German writing, the use of ⟨ß⟩ is rather uncommon. Swiss writers would normally use ⟨ss⟩ where German or Austrian writers use the ⟨ß⟩ character (e. g., *Buße* vs. *Busse*). When texts (or names) from other German speaking areas are quoted, however, the spelling and hence the ⟨ß⟩ is often maintained (particularly in scholarly writing where the spelling of quoted text is not supposed to be touched).

We assume that Swiss writers will normally input ⟨ss⟩ directly when they mean ⟨ss⟩, and we assume furthermore that the ⟨ß⟩-related shorthands `"s` and `"z` are useful also for Swiss writers when they actually need ⟨ß⟩, the more so since the ⟨ß⟩ is not as directly accessible on Swiss keyboards as it is on German and Austrian ones. On the other hand, there might be occasions where writers want to transfer a text from German or Austrian Standard into Swiss Standard German and adapt the spelling on the fly, i. e., transform all ⟨ß⟩ into ⟨ss⟩.

For this special case, we provide an option to make the ⟨ß⟩-related shorthands `"s` and `"z` expand to the respective digraphs[3], ⟨ss⟩ and ⟨sz⟩, rather than to ⟨ß⟩. This is not the default behavior with `swissgerman` since, as mentioned, there are situations when the ⟨ß⟩ is (and has to be) used in Swiss writing, and normally, no shorthand is needed to input (or output) two simple ⟨s⟩ characters. You can opt-in (and out) digraphical expansion of `"s` and `"z` on a global and local level:

- To globally switch on the digraphical expansion, use the Babel modifier `toss` (read: 'to ⟨ss⟩') with `swissgerman`. I. e., pass `swissgerman.toss` (rather than `swissgerman`) as babel option.
- To switch on the digraphical expansion only locally, you can use the boolean switch `\tosstrue`. Likewise, `\tossfalse` switches off (both locally and globally set) digraphical expansion.

Both these changes result in the following deviant behavior of two shorthands:

`"s`	Expands to digraph ⟨ss⟩
`"z`	Expands to digraph ⟨sz⟩

One further note related to the use of ⟨ss⟩ in Swiss Standard German. As opposed to other consonantial letters, the ⟨s⟩ is excluded from the three consonant rule (*Dreikonsonantenregel*) of traditional German spelling which prescribes that one of three identical consonants has to be omitted if a vowel follows the three consonants (i. e., *Schiffahrt*, not *Schifffahrt*), except if the word is hyphenated (*Schiff-fahrt*); the shorthands `"ff` etc. account for that. This does not apply to ⟨s⟩! In that case, always all three consonants are spelled out (e. g., *Kongresssaal*, not *Kongressaal*). This is why we don't provide a shorthand for the ⟨sss⟩ case.

5 Implementation

5.1 General settings

If `germanb.ldf` is read via the deprecated babel option `germanb`, we make it behave as if `german` was specified.

```
\def\tmpa{germanb}
\let\SaveCurrentOption\CurrentOption
\ifx\CurrentOption\tmpa
  \def\CurrentOption{german}
\fi
```

The macro `\LdfInit` takes care of preventing that this file is loaded more than once with the same option, checking the category code of the `@` sign, etc.

```
\LdfInit\CurrentOption{captions\CurrentOption}
```

We define some helper macros that help us to identify later on which variety of German we are currently dealing with.

```
\def\bbl@opt@german{german}
\def\bbl@opt@germanb{germanb}
\def\bbl@opt@austrian{austrian}
\def\bbl@opt@swissgerman{swissgerman}
```

[3] In graphematics, the term *digraph* denotes two characters that make a functional pair (which means, depending on the theoretical assumptions: they represent a single sound or they are semantically distinctive).

Some more work to make germanb behave like german.

```
\ifx\SaveCurrentOption\bbl@opt@germanb
  \ifx\l@german\@undefined
    \@nopatterns{German (trad. orthography)}
    \adddialect\l@german0
  \fi
  \let\l@germanb\l@german
  \AtBeginDocument{%
    \let\captionsgermanb\captionsgerman
    \let\dategermanb\dategerman
    \let\extrasgermanb\extrasgerman
    \let\noextrasgermanb\noextrasgerman
  }
\fi
```

If `germanb.ldf` is read as an option, i.e. via `\usepackage` command, `german` could be an 'unknown' language, so we have to make it known. We check for the existence of `\l@german` and issue a warning if it is unknown.

```
\ifx\l@german\@undefined
  \@nopatterns{German (trad. orthography)}
  \adddialect\l@german0
\fi
```

We set `austrian` as a dialect of `german`, since the Austrian variety uses the same hyphenation patterns as Germany's Standard German. If no German patterns are found, we issue a warning.

```
\ifx\CurrentOption\bbl@opt@austrian
  \ifx\l@german\@undefined
    \@nopatterns{German (trad. orthography), needed by Austrian (trad. orthography)}
    \adddialect\l@austrian0
  \else
    \adddialect\l@austrian\l@german
  \fi
\fi
```

For the Swiss variety, we attempt to load the specific `swissgerman` hyphenation patterns and fall back to `german` if those are not available. If no patterns are found, we issue a warning.

```
\ifx\CurrentOption\bbl@opt@swissgerman
  \ifx\l@swissgerman\@undefined
    \ifx\l@german\@undefined
      \@nopatterns{Swiss Standard German (trad. orthography) and German (trad. orthography)}
      \adddialect\l@swissgerman0
    \else
      \@nopatterns{Swiss Standard German (trad. orthography)}
      \adddialect\l@swissgerman\l@german
    \fi
  \fi
\fi
```

5.2 Language-specific strings (captions)

The next step consists of defining macros that provide language specific strings and settings.

\@captionsgerman The macro \@captionsgerman defines all strings used in the four standard document classes provided with LaTeX for German. This is an internal macro that is inherited and modified by the following macros for the respective language varieties.

```
\@namedef{@captionsgerman}{%
  \def\prefacename{Vorwort}%
  \def\refname{Literatur}%
  \def\abstractname{Zusammenfassung}%
  \def\bibname{Literaturverzeichnis}%
  \def\chaptername{Kapitel}%
  \def\appendixname{Anhang}%
  \def\contentsname{Inhaltsverzeichnis}%
  \def\listfigurename{Abbildungsverzeichnis}%
  \def\listtablename{Tabellenverzeichnis}%
  \def\indexname{Index}%
  \def\figurename{Abbildung}%
  \def\tablename{Tabelle}%
  \def\partname{Teil}%
  \def\enclname{Anlage(n)}%
  \def\ccname{Verteiler}%
  \def\headtoname{An}%
  \def\pagename{Seite}%
  \def\seename{siehe}%
  \def\alsoname{siehe auch}%
  \def\proofname{Beweis}%
  \def\glossaryname{Glossar}%
}
```

\captionsgerman The macro \captionsgerman is identical to \@captionsgerman, but only defined if german is requested.

```
\ifx\CurrentOption\bbl@opt@german
  \@namedef{captionsgerman}{%
    \@nameuse{@captionsgerman}%
  }
\fi
```

\captionsaustrian The macro \captionsaustrian builds on \@captionsgerman, but redefines some strings following Austrian conventions (for the respective variants, cf. [1]). It is only defined if austrian is requested.

```
\ifx\CurrentOption\bbl@opt@austrian
  \@namedef{captionsaustrian}{%
    \@nameuse{@captionsgerman}%
    \def\enclname{Beilage(n)}%
  }
\fi
```

\captionsswissgerman The macro \captionsswissgerman builds on \@captionsgerman, but redefines some strings following Swiss conventions (for the respective variants, cf. [1]). It is only defined if swissgerman is requested.

```
\ifx\CurrentOption\bbl@opt@swissgerman
  \@namedef{captionsswissgerman}{%
    \@nameuse{@captionsgerman}%
    \def\enclname{Beilage(n)}%
  }
\fi
```

5.3 Date localizations

\month@german The macro \month@german defines German month names for all varieties.

```
\def\month@german{\ifcase\month\or
  Januar\or Februar\or M\"arz\or April\or Mai\or Juni\or
  Juli\or August\or September\or Oktober\or November\or Dezember\fi}
```

\dategerman The macro \dategerman redefines the command \today to produce German dates. It is only defined if german is requested.

```
\ifx\CurrentOption\bbl@opt@german
  \def\dategerman{\def\today{\number\day.~\month@german
      \space\number\year}}
\fi
```

\dateswissgerman The macro \dateswissgerman does the same for Swiss Standard German dates. It is only defined if swissgerman is requested. The result is identical to German.

```
\ifx\CurrentOption\bbl@opt@swissgerman
  \def\dateswissgerman{\def\today{\number\day.~\month@german
      \space\number\year}}
\fi
```

\dateaustrian The macro \dateaustrian redefines the command \today to produce Austrian versions of the German dates. Here, the naming of January („Jänner“) differs from the other German varieties. The macro is only defined if austrian is requested.

```
\ifx\CurrentOption\bbl@opt@austrian
  \def\dateaustrian{\def\today{\number\day.~\ifnum1=\month
    J\"anner\else \month@german\fi \space\number\year}}
\fi
```

5.4 Extras

\extrasgerman The macros \extrasgerman, \extrasaustrian and \extrasswissgerman, respectively, will
\extrasaustrian perform all the extra definitions needed for the German language or the respective
\extrasswissgerman variety. The macro \noextrasgerman is used to cancel the actions of \extrasgerman.
\noextrasaustrian \noextrasaustrian and \noextrasswissgerman behave analoguously.
\noextrasswissgerman First, the character " is declared active for all German varieties. This is done once,
\noextrasgerman later on its definition may vary.

```
\initiate@active@char{"}
```

Depending on the option with which the language definition file has been loaded, the macro \extrasgerman, \extrasaustrian or \extrasswissgerman is defined. Each of those is identical: they load the shorthands defined below and activate the " character.

```
\@namedef{extras\CurrentOption}{%
  \languageshorthands{german}}
\expandafter\addto\csname extras\CurrentOption\endcsname{%
  \bbl@activate{"}}
```

toss For Swiss Standard German, we allow optionally to expand the ⟨ß⟩-related shorthands
\tosstrue the Swiss way, i. e. as ⟨ss⟩ (globally, if the modifier toss is used or locally if \tosstrue.).
\tossfalse

```
\newif\iftoss\tossfalse
\newif\ifbbl@toss\bbl@tossfalse
\ifx\bbl@mod@swissgerman\@undefined\else
```

```
  \@expandtwoargs\in@{,toss,}{,\bbl@mod@swissgerman,}
  \ifin@
    \tosstrue
  \fi
  \addto\extrasswissgerman{%
    \iftoss\bbl@tosstrue\else\bbl@tossfalse\fi}
\fi
```

Next, again depending on the option with which the language definition file has been loaded, the macro `\noextrasgerman`, `\noextrasaustrian` or `\noextrasswissgerman` is defined. These deactivate the `"` character and thus turn the shorthands off again outside of the respective variety.

```
\expandafter\addto\csname noextras\CurrentOption\endcsname{%
  \bbl@deactivate{"}}
\ifx\CurrentOption\bbl@opt@swissgerman
  \addto\noextrasswissgerman{\bbl@tossfalse}
\fi
```

In order for TEX to be able to hyphenate German words which contain 'ß' (in the `OT1` position `^^Y`) we have to give the character a nonzero `\lccode` (see Appendix H, the TEXbook).

```
\expandafter\addto\csname extras\CurrentOption\endcsname{%
  \babel@savevariable{\lccode25}%
  \lccode25=25}
```

The umlaut accent macro `\"` is changed to lower the umlaut dots. The redefinition is done with the help of `\umlautlow`.

```
\expandafter\addto\csname extras\CurrentOption\endcsname{%
  \babel@save\"\umlautlow}

\expandafter\addto\csname noextras\CurrentOption\endcsname{%
  \umlauthigh}
```

The German hyphenation patterns can be used with `\lefthyphenmin` and `\righthyphenmin` set to 2.

```
\providehyphenmins{\CurrentOption}{\tw@\tw@}
```

For German texts we need to assure that `\frenchspacing` is turned on.

```
\expandafter\addto\csname extras\CurrentOption\endcsname{%
  \bbl@frenchspacing}
\expandafter\addto\csname noextras\CurrentOption\endcsname{%
  \bbl@nonfrenchspacing}
```

5.5 Active characters, macros & shorthands

The following code is necessary because we need an extra active character. This character is then used as indicated in table 1.

In order to be able to define the function of `"`, we first define a couple of 'support' macros.

`\dq` We save the original double quotation mark character in `\dq` to keep it available, the math accent `\"` can now be typed as `"`.

Furthermore, we define some helper macros for contextual ⟨ß⟩ handling.

```
\begingroup \catcode`\"12
\def\x{\endgroup
  \def\dq{"}
  \def\@SS{\mathchar"7019 }
  \def\bbl@ss{\ifbbl@toss ss\else\textormath{\ss}{\@SS{}}\fi}
  \def\bbl@SS{SS}
  \def\bbl@sz{\ifbbl@toss sz\else\textormath{\ss}{\@SS{}}\fi}
  \def\bbl@SZ{SZ}
}
\x
```

Since we need to add special cases for hyperref which needs hyperref's `\texorpdfstring`, we provide a dummy command for the case that hyperref is not loaded.

```
\providecommand\texorpdfstring[2]{#1}
```

Now we can define the doublequote shorthands: the umlauts,

```
\declare@shorthand{german}{"a}{\textormath{\"{a}\bbl@allowhyphens}{\ddot a}}
\declare@shorthand{german}{"o}{\textormath{\"{o}\bbl@allowhyphens}{\ddot o}}
\declare@shorthand{german}{"u}{\textormath{\"{u}\bbl@allowhyphens}{\ddot u}}
\declare@shorthand{german}{"A}{\textormath{\"{A}\bbl@allowhyphens}{\ddot A}}
\declare@shorthand{german}{"O}{\textormath{\"{O}\bbl@allowhyphens}{\ddot O}}
\declare@shorthand{german}{"U}{\textormath{\"{U}\bbl@allowhyphens}{\ddot U}}
```

tremata,

```
\declare@shorthand{german}{"e}{\textormath{\"{e}}{\ddot e}}
\declare@shorthand{german}{"E}{\textormath{\"{E}}{\ddot E}}
\declare@shorthand{german}{"i}{\textormath{\"{\i}}%
                               {\ddot\imath}}
\declare@shorthand{german}{"I}{\textormath{\"{I}}{\ddot I}}
```

German ß,

```
\declare@shorthand{german}{"s}{\bbl@ss}
\declare@shorthand{german}{"S}{\bbl@SS}
\declare@shorthand{german}{"z}{\bbl@sz}
\declare@shorthand{german}{"Z}{\bbl@SZ}
```

German and French/Swiss quotation marks,

```
\declare@shorthand{german}{"'}{\glqq}
\declare@shorthand{german}{"’}{\grqq}
\declare@shorthand{german}{"<}{\flqq}
\declare@shorthand{german}{">}{\frqq}
```

discretionary commands

```
\declare@shorthand{german}{"c}{\textormath{\bbl@disc ck}{c}}
\declare@shorthand{german}{"C}{\textormath{\bbl@disc CK}{C}}
\declare@shorthand{german}{"F}{\textormath{\bbl@disc F{FF}}{F}}
\declare@shorthand{german}{"l}{\textormath{\bbl@disc l{ll}}{l}}
\declare@shorthand{german}{"L}{\textormath{\bbl@disc L{LL}}{L}}
\declare@shorthand{german}{"m}{\textormath{\bbl@disc m{mm}}{m}}
\declare@shorthand{german}{"M}{\textormath{\bbl@disc M{MM}}{M}}
\declare@shorthand{german}{"n}{\textormath{\bbl@disc n{nn}}{n}}
\declare@shorthand{german}{"N}{\textormath{\bbl@disc N{NN}}{N}}
\declare@shorthand{german}{"p}{\textormath{\bbl@disc p{pp}}{p}}
\declare@shorthand{german}{"P}{\textormath{\bbl@disc P{PP}}{P}}
\declare@shorthand{german}{"r}{\textormath{\bbl@disc r{rr}}{r}}
\declare@shorthand{german}{"R}{\textormath{\bbl@disc R{RR}}{R}}
```

```
\declare@shorthand{german}{"t}{\textormath{\bbl@disc t{tt}}{t}}
\declare@shorthand{german}{"T}{\textormath{\bbl@disc T{TT}}{T}}
```

(we need to treat `"f` a bit differently in order to preserve the ff-ligature)

```
\declare@shorthand{german}{"f}{%
  \texorpdfstring{\textormath{\bbl@discff}{f}}% TeX string
                 {f}% PDF string
}
\def\bbl@discff{\penalty\@M
  \afterassignment\bbl@insertff \let\bbl@nextff= }
\def\bbl@insertff{%
  \if f\bbl@nextff
    \expandafter\@firstoftwo\else\expandafter\@secondoftwo\fi
  {\relax\discretionary{ff-}{f}{ff}\bbl@allowhyphens}{f\bbl@nextff}}
\let\bbl@nextff=f
```

and some additional commands (hyphenation, line breaking and ligature control):

```
\declare@shorthand{german}{"-}{\nobreak\-\bbl@allowhyphens}
\declare@shorthand{german}{"|}{%
  \texorpdfstring{\textormath{\penalty\@M\discretionary{-}{}{\kern.03em}\bbl@allowhyphens}{}}% TeX string
                 {}% PDF string
}
\declare@shorthand{german}{""}{\hskip\z@skip}
\declare@shorthand{german}{"~}{%
  \texorpdfstring{\textormath{\leavevmode\hbox{-}}{-}}% tex string
                 {-}% PDF string
}
\declare@shorthand{german}{"=}{\penalty\@M-\hskip\z@skip}
\declare@shorthand{german}{"/}{\textormath
  {\bbl@allowhyphens\discretionary{/}{}{/}\bbl@allowhyphens}{}}
```

and some shorthands to support gender-sensitive spelling:

```
\def\mkgender{*}
\declare@shorthand{german}{":}{\nobreak:\bbl@allowhyphens}
\declare@shorthand{german}{"*}{\nobreak*\bbl@allowhyphens}
\declare@shorthand{german}{"_}{\nobreak\_\bbl@allowhyphens}
\declare@shorthand{german}{"x}{\nobreak\mkgender\bbl@allowhyphens}
```

`\mdqon` `\mdqoff` `\ck`

All that's left to do now is to define a couple of commands for reasons of compatibility with `german.sty`.

```
\def\mdqon{\shorthandon{"}}
\def\mdqoff{\shorthandoff{"}}
\def\ck{\bbl@allowhyphens\discretionary{k-}{k}{ck}\bbl@allowhyphens}
```

The macro `\ldf@finish` takes care of looking for a configuration file, setting the main language to be switched on at `\begin{document}` and resetting the category code of `@` to its original value.

```
\ldf@finish\CurrentOption
```

5.6 `austrian.ldf`, `german.ldf` and `swissgerman.ldf`

Babel expects a ⟨*lang*⟩`.ldf` file for each ⟨*lang*⟩. So we create portmanteau ldf files for `austrian`, `german` and `swissgerman`.[4] These files themselves only load `germanb.ldf`, which

[4] For `austrian` and `german`, this is not strictly necessary, since babel provides aliases for these languages (pointing to `germanb`). However, since babel does not officially support these aliases anymore after the language

does the real work:

```
212 \input germanb.ldf\relax
```

Change History

definition files have been separated from the core, we provide the whole range of ldf files for the sake of completeness.

References

[1] Ammon, Ulrich et al.: *Variantenwörterbuch des Deutschen. Die Standardsprache in Österreich, der Schweiz und Deutschland sowie in Liechtenstein, Luxemburg, Ostbelgien und Südtirol.* Berlin, New York: De Gruyter.

[2] Braams, Johannes and Bezos, Javier: *Babel.* http://www.ctan.org/pkg/babel.

[3] Deutschsprachige Trennmustermannschaft: *dehyph-exptl – Experimental hyphenation patterns for the German language.* https://ctan.org/pkg/dehyph-exptl.

[4] Partl, Hubert: *German TEX*, *TUGboat* 9/1 (1988), p. 70–72.

[5] Raichle, Bernd: *German.* http://www.ctan.org/pkg/german.

[6] Manuel Pégourié-Gonnard et al.: *hyph-utf8 – Hyphenation patterns expressed in UTF-8.* https://ctan.org/pkg/hyph-utf8.