# TRANSLATIONS

v1.2b 2015/07/09

Internationalization of  $\LaTeX$  2 $\varepsilon$  Packages

### Clemens NIEDERBERGER

http://www.mychemistry.eu/forums/forum/translations/

contact@mychemistry.eu

### **Table of Contents**

1	Mot	tivation	1		3.5.2 Own Dictionaries	9
2	Lice	ense and Requirements	2		3.5.3 <b>TRANSLATIONS</b> Basic Dictionaries	10
3	Usa	ge	2	4	<b>Defined Languages</b>	13
	3.1	Background	2		4.1 Base Languages	13
	3.2	Available Commands	3		4.2 Language Dialects	14
	3.3	A Small Example	6		4.3 Language Aliases	14
	3.4	Usage in Packages	7	_	Implementation	4 =
		3.4.1 Basic Structure	7	5	Implementation	17
		3.4.2 The 'fallback' language	7	Bi	bliography	38
	3.5	Dictionaries	9		0 1 7	Ŭ
		3.5.1 Background	9	In	dex	38

### 1 Motivation

This package provides means for package authors to have an easy interface for internationalization of their packages. The functionality of this package is in many parts also covered by the package translator [Tan10] (part of the beamer bundle). Internationalization is also possible with babel [Bra13] and it's \addto\captions \language \rangle mechanism or KOMA-Script's \providecaptionname and similar commands. However, I believe that TRANSLATIONS is more flexible than all of these. Unlike translator it detects the used (babel or polyglossia [Cha13]) language itself and provides expandable retrieving of the translated key. TRANSLATIONS also provides support for language dialects which means package authors can for example distinguish between British, Australian, Canadian and US English.

The first draft of the package was written since I missed an expandable version of translator's \translate command. Once I had the package available I began using it in various of my other packages so it got extended to the needs I faced there.

### 2 License and Requirements

Permission is granted to copy, distribute and/or modify this software under the terms of the LATEX Project Public License (LPPL), version 1.3 or later (http://www.latex-project.org/lppl.txt). The software has the status "maintained."

TRANSLATIONS requires the packages cnltx-base from the cnltx bundle [Nie14] and scrlfile (part of the KOMA-Script bundle [KN12]).

### 3 Usage

### 3.1 Background

The **TRANSLATIONS** package enables the author of a package or a class (or a document) to declare translations of key words in different languages and fetch these translations in the document depending on the active language as set by babel or polyglossia. Since **TRANSLATIONS** checks which language is active it is generally not necessary (although possible) to specify the language for which a translation should be fetched manually.

TRANSLATIONS knows of three types of languages: main languages (see table 2 on page 13), language dialects (see table 3 on page 14), and language aliases (see table 4 on page 15). For the commands declaring or fetching a translation base languages and language aliases are equivalent. Dialects are similar to aliases but there are important differences. An alias can for example be an alias of a dialect.

Figure 1 shows what happens if **TRANSLATIONS** is asked to fetch a translation for a given key.

What happens if you declare a translation? There are four cases:

- 1. You declare a translation for a base language: this is the normal case where an internal macro is defined which can be fetched by the \GetTranslation command (see section 3.2).
- 2. You declare a translation for a language alias: this is the very same as the first case since the same internal macro is defined.
- 3. You declare a translation for a dialect: this is two-fold. Either a translation for the base language exists so only the translation for the dialect is saved. If the translation for the base language does not exist it is defined to be the same as the one for the dialect.
- 4. You declare a translation for an alias of a dialect: this is the very same as the third case as again the internal macros are the same.

check if language is a dialect check if fallback translation is given

FIGURE 1: Schematic representation of **TRANSLATIONS**' translating mechansim. Notes: <sup>a</sup> except for a possible fallback translation. <sup>b</sup> *i. e.*, the base language of the dialect.

### 3.2 Available Commands

Below the commands provided by **TRANSLATIONS** are explained. The symbol \* means that the command is expandable. Commands without the marker aren't expandable.

### $\DeclareLanguage{\langle lang \rangle}$

Declare a language that can be used by **TRANSLATIONS**. If the language already exists it will be silently redefined. This command can only be used in the preamble. It should never be necessary to use this command as **TRANSLATIONS** already declares loads of languages (section 4). Should you miss one please send me an email and I'll add it to **TRANSLATIONS**.

### $\DeclareLanguageAlias\{\langle lang_2\rangle\}\{\langle lang_1\rangle\}$

Declares  $\langle lang2 \rangle$  to be an alias of  $\langle lang1 \rangle$ . If  $\langle lang1 \rangle$  doesn't exist yet a warning will be raised and it will be defined. This command can only be used in the preamble. It should never be necessary to use this command as **TRANSLATIONS** already declares loads of languages (section 4). Should you miss one please send me an email and I'll add it to **TRANSLATIONS**.

### $\DeclareLanguageDialect{\langle dialect \rangle}{\langle lang \rangle}$

Declares  $\langle dialect \rangle$  to be a dialect of language  $\langle lang \rangle$ . If a translation for  $\langle dialect \rangle$  is provided it is used by the translation macros. If there is none the corresponding translation for  $\langle lang \rangle$  is used instead. It should never be necessary to use this command as **TRANSLATIONS** already declares loads of languages (section 4). Should you miss one please send me an email and I'll add it to **TRANSLATIONS**.

#### $\NewTranslation{\langle lang \rangle} {\langle key \rangle} {\langle translation \rangle}$

Defines a translation of key  $\langle key \rangle$  for the language  $\langle lang \rangle$ . An error will be raised if a translation of  $\langle key \rangle$  already exists. This command can only be used in the preamble.

### $\RenewTranslation{\langle lang \rangle} {\langle key \rangle} {\langle translation \rangle}$

Redefines a translation of key  $\langle key \rangle$  for the language  $\langle lang \rangle$ . An error will be raised if no translation of  $\langle key \rangle$  exists. This command can only be used in the preamble.

### $\ProvideTranslation{\langle lang \rangle} {\langle key \rangle} {\langle translation \rangle}$

Introduced in version 1.2

Provides a translation of key  $\langle key \rangle$  for the language  $\langle lang \rangle$ . If a translation of  $\langle key \rangle$  already exists it won't be overwritten and no error will be raised. This command can only be used in the preamble.

### $\DeclareTranslation{\langle lang \rangle} {\langle key \rangle} {\langle translation \rangle}$

Defines a translation of key  $\langle key \rangle$  for the language  $\langle lang \rangle$ . No error will be raised if a translation of  $\langle key \rangle$  already exists. This command can only be used in the preamble.

### $\DeclareTranslationFallback{\langle key \rangle} {\langle fallback \rangle}$

Defines a fallback translation for key  $\langle key \rangle$  that is used in case no translation of  $\langle key \rangle$  for the currently active language has been provided. No error will be raised if a fallback for  $\langle key \rangle$  already exists. This command can only be used in the preamble.

### \* \GetTranslationFor{⟨lang⟩}{⟨key⟩}

Fetches and prints the translation of  $\langle key \rangle$  for the language  $\langle lang \rangle$ . This command is expandable.

### \* \GetTranslation{ $\langle key \rangle$ }

Fetches and prints the translation of  $\langle key \rangle$  for the currently active language (as for example set by babel). This command is expandable.

### \* \GetLCTranslationFor $\{\langle lang \rangle\} \{\langle key \rangle\}$

Introduced in version 1.1

Fetches and prints the translation of  $\langle key \rangle$  for the language  $\langle lang \rangle$ . This command ensures that the fetched translation is set lowercase. This command is expandable (well, sort of: in an \edef it leaves \lowercase{ $\langle translation \rangle$ } in the input stream where  $\langle translation \rangle$  is what \GetTranslationFor would expand to).

### \* \GetLCTranslation $\{\langle key \rangle\}$

Introduced in version 1.1

Fetches and prints the translation of  $\langle key \rangle$  for the currently active language (as for example set by babel). This command ensures that the fetched translation is set lowercase. This command is expandable (well, sort of: in an \edef it leaves \lowercase{ $\langle translation \rangle$ } in the input stream where  $\langle translation \rangle$  is what \GetTranslation would expand to).

### $\GetTranslationForWarn\{\langle lang\rangle\}\{\langle key\rangle\}$

Introduced in version 1.0

Fetches and prints the translation of  $\langle key \rangle$  for the language  $\langle lang \rangle$ . Issues a warning if no translation is available at the cost of expandability.

### $\GetTranslationWarn\{\langle key \rangle\}\$

Introduced in version 1.0

Fetches and prints the translation of  $\langle key \rangle$  for the currently active language (as for example set by babel). Issues a warning if no translation is available at the cost of expandability.

### $\GetLCTranslationForWarn\{\langle lang \rangle\}\{\langle key \rangle\}$

Introduced in version 1.1

Fetches and prints the translation of  $\langle \textit{key} \rangle$  for the language  $\langle \textit{lang} \rangle$ . This command ensures that

the fetched translation is set lowercase. Issues a warning if no translation is available at the cost of expandability.

### $\GetLCTranslationWarn\{\langle key \rangle\}\$

Introduced in version 1.1

Fetches and prints the translation of  $\langle key \rangle$  for the currently active language (as for example set by babel). This command ensures that the fetched translation is set lowercase. Issues a warning if no translation is available at the cost of expandability.

```
\SaveTranslationFor{\langle cmd \rangle} {\langle lang \rangle} {\langle key \rangle}
```

Fetches and saves the translation of  $\langle key \rangle$  for the language  $\langle lang \rangle$  in the macro  $\langle cmd \rangle$ .

```
\SaveTranslation{\langle cmd \rangle} {\langle key \rangle}
```

Fetches and saves the translation of  $\langle key \rangle$  for the currently active language (as for example set by babel) in the macro  $\langle cmd \rangle$ .

```
\LoadDictionary{\langle name \rangle}
```

Loads a file named  $\langle name \rangle$  -  $\langle lang \rangle$ . trsl where  $\langle lang \rangle$  corresponds to the lowercase name of the current language as defined with \DeclareLanguage. This file should contain the translations for the specified language.

```
\LoadDictionaryFor{\langle lang \rangle} {\langle name \rangle}
```

Loads a file named  $\langle name \rangle - \langle lang \rangle$ .trsl.

```
\MewDictTranslation{\langle key \rangle} {\langle translation \rangle}
```

Introduced in version 0.10

This command is to be used in a dictionary file and picks up the language of that file. Issues an error if either the translation for the  $\langle key \rangle$  or the dictionary entry for the  $\langle key \rangle$  already exists.

```
\RenewDictTranslation{\langle key \rangle} {\langle translation \rangle}
```

Introduced in version 0.10

This command is to be used in a dictionary file and picks up the language of that file. Issues an error if either the translation for the  $\langle key \rangle$  or the dictionary entry for the  $\langle key \rangle$  doesn't exist.

```
\ProvideDictTranslation{\langle key \rangle} {\langle translation \rangle}
```

Introduced in version 0.10

This command is to be used in a dictionary file and picks up the language of that file. Only defines the translation and adds a corresponding dictionary entry if they don't exist yet. This command is used in the dictionaries that a part of **TRANSLATIONS**.

```
\DeclareDictTranslation{\langle key \rangle} {\langle translation \rangle}
```

This command is to be used in a dictionary file and picks up the language of that file, see section 3.5 for an example. Defines the translation and adds a dictionary entry regardless if they exist or not.

```
\ProvideDictionaryFor{\langle lang \rangle} {\langle name \rangle} [\langle date \rangle]
```

Needs to be in a dictionary file. This command tells **TRANSLATIONS** that the file indeed is a dictionary and also sets the language for the dictionary which is used by **\DeclareDictTranslation**.

```
* \P \PrintDictionaryFor{\langle lang \rangle}{\langle name \rangle}{\langle pre \rangle}{\langle mid \rangle}{\langle post \rangle}
```

Introduced in version 1.0

Prints all entries of dictionary  $\langle name \rangle$  in language  $\langle lang \rangle$  in the order the entries have been declared. For every entry the code

```
\langle pre \rangle \langle key \rangle \langle mid \rangle \langle translation \rangle \langle post \rangle
```

is printed. The dictionary must have been loaded of course. There is probably only a very limited number of use cases for this command. (It was for example used to print table 1.)

### \*\baselanguage $\{\langle lang \rangle\}$

Changed in version 1.2a

Returns the (internal) base name of the given language, language alias or language dialect. For a dialect this expands to the name of language it is a dialect of. For a base language (see section 4.1) this usually simply is the lowercase version of the name.

```
\begin{tabular}{ll} $\Rightarrow$ english \\ $\Rightarrow$ engl
```

\*\ifcurrentlanguage $\{\langle lang \rangle\}\{\langle true \rangle\}\{\langle false \rangle\}$ 

Introduced in version 1.2

Places  $\langle true \rangle$  in the input stream if the current language is  $\langle lang \rangle$ . Note: a dialect counts as a language of it's own here. \ifcurrentlanguage{English} will for example be  $\langle false \rangle$  if the current babel language is american.

\*\ifcurrentbaselanguage{ $\langle lang \rangle$ }{ $\langle true \rangle$ }{ $\langle false \rangle$ }

Introduced in version 1.2

Places  $\langle true \rangle$  in the input stream if the current language is  $\langle lang \rangle$ . Note: a dialect does not count as a language of it's own here. If the current babel language is a merican then \ifcurrentbaselanguage{English} will be  $\langle true \rangle$ .

### 3.3 A Small Example

This section demonstrates with two short examples how the macros are used. The first example covers the basics: declaring of translations and then retrieving and typesetting them.

```
1 % in the preamble:
2 % \DeclareTranslation{English}{Kueche}{kitchen}
3 % \DeclareTranslation{German}{Kueche}{K\"uche}
4 % \DeclareTranslation{Spanish}{Kueche}{cocina}
5 % \DeclareTranslation{French}{Kueche}{cuisine}

6
7 \GetTranslation{Kueche}
8 \SaveTranslation\kitchen{Kueche}
9 \SaveTranslationFor\cuisine{french}{Kueche}

10
11 \Selectlanguage{ngerman}
12 \GetTranslation{Kueche} \kitchen\ \GetTranslationFor{spanish}{Kueche}
13 \cuisine

kitchen
Küche kitchen cocina cuisine
```

The next example demonstrates the use of dialects and how they fall back to the translation for the main language if no extra translation was declared:

```
1 % in the preamble:
2 % \DeclareTranslation{English}{farbe}{color}
3 % \DeclareTranslation{British}{farbe}{colour}

4
5 \GetTranslationFor{English}{farbe}
6 \GetTranslationFor{British}{farbe}
7 \GetTranslationFor{American}{farbe}

color colour color
```

### 3.4 Usage in Packages

### 3.4.1 Basic Structure

A typical usage in a package would look as follows:

```
1 \RequirePackage{translations}
2 \DeclareTranslationFallback{mypackage-title}{Nice Title}
3 \DeclareTranslation{English}{mypackage-title}{Nice Title}
4 \DeclareTranslation{French}{mypackage-title}{Beau Titre}
5 \DeclareTranslation{German}{mypackage-title}{Sch\"{o}ner Titel}
6 ...
7 \def\mypackage@title{\GetTranslation{mypackage-title}}
```

That is, a package defines some unique key for an expression and at least defines a fall-back translation. Additionally translations for as many languages as the author wants are defined. A user then may add  $\ensuremath{\mathsf{DeclareTranslation}} \{\langle language \rangle\} \{\langle translation \rangle\}$  if they find their translation missing.

#### 3.4.2 The 'fallback' language

If a user has neither loaded babel nor polyglossia **TRANSLATIONS** will use English as language and translate to English if the translation was provided. If the user *has* loaded one of the language packages but has chosen a language for which no translation is defined the language 'fallback' will be used, *i. e.*, the translation provided with **DeclareTranslationFallback**. If no fallback translation is provided either the translation will expand to the literal string.

The following three examples should make this concept clear:

```
1 \documentclass[margin=5mm]{standalone}
2 \usepackage{translations}
3 \DeclareTranslation{German}{foo-literal}{bar}
4 \begin{document}
5 \GetTranslation{foo-literal} % foo-literal
6 \end{document}

foo-literal
```

```
1 \documentclass[margin=5mm]{standalone}
2 \usepackage{translations}
3 \DeclareTranslationFallback{foo-literal}{foo}
4 \DeclareTranslation{German}{foo-literal}{bar}
5 \begin{document}
6 \GetTranslation{foo-literal} % foo
7 \end{document}
foo
```

```
1 \documentclass[margin=5mm]{standalone}
2 \usepackage[ngerman]{babel}
3 \usepackage{translations}
4 \DeclareTranslation{German}{foo-literal}{bar}
5 \begin{document}
6 \GetTranslation{foo-literal} % bar
7 \end{document}

bar
```

### 3.5 Dictionaries

### 3.5.1 Background

TRANSLATIONS provides the means to write dictionary files that can be loaded by packages or in a document. Dictionaries can be loaded for the currently active language with \LoadDictionaryFor.

```
\LoadDictionary{\langle name \rangle}
```

Loads a file named  $\langle name \rangle$  -  $\langle lang \rangle$ . trsl where  $\langle lang \rangle$  corresponds to the lowercase name of the current language as defined with \DeclareLanguage. This file should contain the translations for the specified language.

```
\LoadDictionaryFor\{\langle lang \rangle\} \{\langle name \rangle\}
Loads a file named \langle name \rangle - \langle lang \rangle.trsl.
```

A package could provide dictionary files for its language dependent settings and include the needed one at begin document. The basics for creating a dictionary file are explained in section 3.5.2.

TRANSLATIONS already provides a few basic dictionary files. If the main document language fits to one of the provided files the corresponding basic dictionary is loaded at begin document by TRANSLATIONS, see section 3.5.3 for more on this.

### 3.5.2 Own Dictionaries

A typical dictionary file should look as follows:

```
1 % this is file housing-german.trsl
2 \ProvideDictionaryFor{German}{housing}[<version info>]
3 \ProvideDictTranslation{kitchen (housing)}{K\"uche}
4 \ProvideDictTranslation{bathroom (housing)}{Bad}
5 \ProvideDictTranslation{living room (housing)}{Wohnzimmer}
6 \ProvideDictTranslation{bedroom (housing)}{Schlafzimmer}
7 ...
8 \endinput
```

The usage is similar to the one in a package: unique keys are given translations, this time for the language the dictionary file is declared for only. Translations can be declared by one of the following commands:

```
\label{eq:newDictTranslation} $$\operatorname{\cont}(key) = {\langle translation \rangle}$$
```

Introduced in version 0.10

This command is to be used in a dictionary file and picks up the language of that file. Issues an error if either the translation for the  $\langle key \rangle$  or the dictionary entry for the  $\langle key \rangle$  already exists.

### $\RenewDictTranslation{\langle key \rangle} {\langle translation \rangle}$

Introduced in version 0.10

This command is to be used in a dictionary file and picks up the language of that file. Issues an error if either the translation for the  $\langle key \rangle$  or the dictionary entry for the  $\langle key \rangle$  doesn't exist.

### $\ProvideDictTranslation{\langle key \rangle} {\langle translation \rangle}$

Introduced in version 0.10

This command is to be used in a dictionary file and picks up the language of that file. Only defines the translation and adds a corresponding dictionary entry if they don't exist yet. This command is used in the dictionaries that a part of **TRANSLATIONS**.

### $\DeclareDictTranslation{\langle key \rangle} {\langle translation \rangle}$

This command is to be used in a dictionary file and picks up the language of that file, see section 3.5 for an example. Defines the translation and adds a dictionary entry regardless if they exist or not.

Every dictionary file *must* contain the declaration \ProvideDictionaryFor:

### $\ProvideDictionaryFor{\langle lang \rangle} {\langle name \rangle} [\langle date \rangle]$

Needs to be in a dictionary file. This command tells **TRANSLATIONS** that the file indeed is a dictionary and also sets the language for the dictionary which is used by **NewDictTranslation** or similar commands.

### 3.5.3 TRANSLATIONS' Basic Dictionaries

TRANSLATIONS already provides a basic dictionary for the languages English, French, German and Spanish. This dictionary is loaded automatically if the document language is one of these four. If you'd like to contribute and add the basic dictionary in your language this is more than welcome and highly appreciated! The easiest way to do this would be to copy one of the existing files translations-basic-dictionary- $\langle lang \rangle$ .trsl and modify the file accordingly. You can then send me the file via email and I'll add it to TRANSLATIONS.

Table 1 lists all words provided by the basic dictionary for German.

TABLE 1: All entries of TRANSLATIONS' basic dictionary in German.

key	translation	
Abstract	Zusammenfassung	
Addresses	Adressen	
addresses	Adressen	
Address	Adresse	
address	Adresse	
and	und	
Appendix	Anhang	
Authors	Autoren	
authors	Autoren	
Author	Autor	

key	translation
author	Autor
Bibliography	Literaturverzeichnis
СС	Verteiler
Chapters	Kapitel
chapters	Kapitel
Chapter	Kapitel
chapter	Kapitel
Conclusion	Zusammenfassung
conclusion	Zusammenfassung
Contents	Inhaltsverzeichnis
Continuation	Fortsetzung
continuation	Fortsetzung
cont	Forts
encl (plural)	Anlagen
encl (singular)	Anlage
encl	Anlage(n)
Figures	Abbildungen
figures	Abbildungen
Figure	Abbildung
figure	Abbildung
From	Von
from	von
Glossary	Glossar
Index	Index
Introduction	Einleitung
introduction	Einleitung
List of Figures and Tables	Abbildungs- und Tabellenverzeichnis
List of Figures	Abbildungsverzeichnis
List of Tables	Tabellenverzeichnis
or	oder
Outline	Gliederung
Overview	Übersicht
Pages	Seiten
pages	Seiten
Page	Seite
page	Seite
Paragraphs	Absätze
paragraphs	Absätze
Paragraph	Absatz
paragraph	Absatz
Parts	Teile

key	translation
parts	Teile
Part	Teil
part	Teil
Preface	Vorwort
Proofs	Beweise
proofs	Beweise
Proof	Beweis
proof	Beweis
References	Literatur
Related work	Verwandte Arbeiten
Related Work	Verwandte Arbeiten
Sections	Abschnitte
sections	Abschnitte
Section	Abschnitt
section	Abschnitt
See also	Siehe auch
see also	siehe auch
See	Siehe
see	siehe
Sketch of Proofs	Beweisskizzen
Sketch of proofs	Beweisskizzen
Sketch of Proof	Beweisskizze
Sketch of proof	Beweisskizze
Subsections	Unterabschnitte
subsections	Unterabschnitte
Subsection	Unterabschnitt
subsection	Unterabschnitt
Summary	Zusammenfassung
Tables	Tabellen
tables	Tabellen
Table	Tabelle
table	Tabelle
То	An
to	an
Monday	Montag
Tuesday	Dienstag
Wednesday	Mittwoch
Thursday	Donnerstag
Friday	Freitag
Saturday	Samstag
Sunday	Sonntag

key	translation
January	Januar
February	Februar
March	März
April	April
May	Mai
June	Juni
July	Juli
August	August
September	September
October	Oktober
November	November
December	Dezember

## 4 Defined Languages

### 4.1 Base Languages

Quite a number of languages already are defined, either directly or via an alias. So, before you define a language you should take a look at the tables below if the language doesn't already exist. Table 2 lists all base languages, "fallback" being a dummy language used for fallback translations. Tables 2, 3 and 4 list *all* language names known to **TRANSLATIONS**. However, they're not sorted alphabetically but listed in the order they have been defined. I tried to make the definitions in an alphabetical order but sometimes rather grouped related language names together.

If you miss a language or recognize a language that has falsely been declared as an alias but should rather be a dialect or base language itself (or any variation of this theme) please let me know, preferably with a short explanation what's wrong and why.

TABLE 2: Base languages defined by TRANSLATIONS, from left to right in the order of definition.

fallback	afrikaans	albanian	amharic	arabic
armenian	asturian	basque	bengali	breton
bulgarian	catalan	coptic	czech	danish
dutch	english	esperanto	estonian	ethiop
farsi	finnish	french	friulan	gaelic
galician	german	greek	hebrew	hindustani
hungarian	icelandic	interlingua	italian	japanese
kannada	korean	ladin	lao	latin
latvian	lithuanian	malay	malayalam	maldivian
marathi	mongolian	norwegian	occitan	piedmontese
pinyin	polish	portuges	romanian	romansh

russian	samin	sanskrit	serbocroatian	slovak
slovenian	sorbian	spanglish	spanish	swedish
tamil	telugu	thai	tibetan	turkish
turkmen	ukrainian	vietnamese	welsh	canadien
acadian	american	australian	british	canadian
newzealand	irish	scottish	austrian	hindi
urdu	indonesian	brazil	serbian	croatian
lowersorbian	uppersorbian	swissgerman		

### 4.2 Language Dialects

TRANSLATIONS also defines a few dialects of thebase languages. They are listed in table 3. The decision what is a dialect and what is an alias is not always clear. I am no linguist so I looked up information available on the internet. A language that was described as "standardized register" was always defined as a dialect. For some other languages it seemed to make sense, such as British or Austrian. The decisions are open for debate.

TABLE 3: All dialects defined by TRANSLATIONS, from left to right in the order of definition.

dialect	language	dialect	language
canadien	french	acadian	french
american	english	australian	english
british	english	canadian	english
newzealand	english	irish	gaelic
scottish	gaelic	austrian	german
hindi	hindustani	urdu	hindustani
indonesian	malay	brazil	portuges
serbian	serbocroatian	croatian	serbocroatian
lowersorbian	sorbian	uppersorbian	sorbian
swissgerman	german		

### 4.3 Language Aliases

To most of the base languages and dialects at least one alias exists, the uppercase variant. This is due to the fact that it is common to write language names uppercased. For a number of languages aliases were defined in order to match babel's or polyglossia's names for the languages. Others are defined because there apparently exist more than one name for the same language. The decisions are not consistent. For example it could be argued that "deutsch" is an alias of "German". I am open to suggestions and improvements. All defined aliases are listed in table 4.

## 4 Defined Languages

TABLE 4: All language aliases defined by **TRANSLATIONS**, from left to right in the order of definition.

alias	language	alias	language
Fallback	fallback	Afrikaans	afrikaans
Albanian	albanian	Amharic	amharic
Arabic	arabic	Armenian	armenian
Asturian	asturian	astur-leonese	asturian
Astur-Leonese	astur-leonese	asturian-leonese	asturian
Asturian-Leonese	asturian-leonese	Basque	basque
Bengali	bengali	Breton	breton
Bulgarian	bulgarian	Catalan	catalan
Coptic	coptic	coptic egyptian	coptic
Coptic Egyptian	coptic egyptian	Czech	czech
Danish	danish	Dutch	dutch
Farsi	farsi	Finnish	finnish
francais	french	Francais	francais
Canadien	canadien	French	french
Acadian	acadian	frenchle	french
American	american	Australian	australian
British	british	Canadian	canadian
English	english	UKenglish	british
USenglish	american	Newzealand	newzealand
Ethiop	ethiop	Esperanto	esperanto
Estonian	estonian	Friulan	friulan
Gaelic	gaelic	Irish	irish
irish gaelic	irish	Irish Gaelic	irish
Scottish	scottish	scottish gaelic	scottish
Scottish Gaelic	scottish	Galician	galician
German	german	germanb	german
ngerman	german	Austrian	austrian
naustrian	austrian	Greek	greek
polutonikogreek	greek	ibygreek	greek
bgreek	greek	Hebrew	hebrew
Hindustani	hindustani	hindi-urdu	hindustani
Hindi-Urdu	hindi-urdu	Hindi	hindi
Urdu	urdu	Hungarian	hungarian
magyar	hungarian	Magyar	magyar
Icelandic	icelandic	Interlingua	interlingua
Italian	italian	Japanese	japanese
Kannada	kannada	Korean	korean
Ladin	ladin	Lao	lao
laotian	lao	Laotian	laotian

## 4 Defined Languages

alias	language	alias	language
Latin	latin	Latvian	latvian
lettish	latvian	Lettish	lettish
Lithuanian	lithuanian	Malay	malay
Indonesian	indonesian	indon	indonesian
bahasa meyalu	malay	Bahasa Meyalu	bahasa meyalu
bahasa	bahasa meyalu	Bahasa	bahasa
bahasai	bahasa	bahasam	bahasa
Malayalam	malayalam	Maldivian	maldivian
divehi	maldivian	Divehi	divehi
Marathi	marathi	Mongolian	mongolian
norsk	norwegian	Norsk	norsk
Norwegian	norwegian	nynorsk	norwegian
Nynorsk	nynorsk	Occitan	occitan
lenga d'oc	occitan	langue d'oc	occitan
Piedmontese	piedmontese	piemontese	piedmontese
Piemontese	piemontese	piemonteis	piedmontese
Piemonteis	piemonteis	Pinyin	pinyin
Polish	polish	Brazil	brazil
brazilian	brazil	Brazilian	brazilian
Portuges	portuges	portuguese	portuges
Portuguese	portuguese	Romanian	romanian
Romansh	romansh	Romansch	romansh
Rumantsh	romansh	Rumantsch	romansh
Romanche	romansh	Russian	russian
Samin	samin	north sami	samin
North Sami	north sami	northern sami	north sami
Northern Sami	northern sami	Sanskrit	sanskrit
Serbocroatian	serbocroatian	serbo-croatian	serbocroatian
Serbo-Croatian	serbocroatian	Serbian	serbian
serbianc	serbian	Croatian	croatian
Slovak	slovak	Slovenian	slovenian
Sorbian	sorbian	Lowersorbian	lowersorbian
Uppersorbian	uppersorbian	lsorbian	lowersorbian
usorbian	uppersorbian	lower sorbian	lowersorbian
upper sorbian	uppersorbian	Lower Sorbian	lowersorbian
Upper Sorbian	uppersorbian	Spanglish	spanglish
Spanish	spanish	Swedish	swedish
swiss	swissgerman	Swiss	swiss
Swissgerman	swissgerman	swiss german	swissgerman
Swiss German	swiss german	Tamil	tamil
Telugu	telugu	Thai	thai

alias	language	alias	language
thaicjk	thai	Thaicjk	thaicjk
Tibetan	tibetan	Turkish	turkish
Turkmen	turkmen	Ukrainian	ukrainian
Vietnamese	vietnamese	Welsh	welsh

These languages *should* cover all languages which are currently covered by babel and polyglossia but very likely this is not the case. Should you miss a language please send me an email so I can add it to TRANSLATIONS.

```
1 %
2 % the TRANSLATIONS package
   internationalizations of LaTeX2e packages
7 % Clemens Niederberger
8 % Web: http://www.mychemistry.eu/forums/forum/translations
9 % E-Mail: contact@mychemistry.eu
10 %
11 % Copyright 2012-2015 Clemens Niederberger
_{13} % This work may be distributed and/or modified under the
14 % conditions of the LaTeX Project Public License, either version 1.3
_{15} % of this license or (at your option) any later version.
16 % The latest version of this license is in
17 % http://www.latex-project.org/lppl.txt
18 % and version 1.3 or later is part of all distributions of LaTeX
19 % version 2005/12/01 or later.
_{
m 21} % This work has the LPPL maintenance status `maintained'.
23 % The Current Maintainer of this work is Clemens Niederberger.
24 %
_{25} % If you have any ideas, questions, suggestions or bugs to report, please
26 % feel free to contact me.
27 %
28 \def\@trnslt@date{2015/07/09}
29 \def\@trnslt@version{v1.2b}
30 \def\@trnslt@info{internationalization of LaTeX2e packages}
32 \ProvidesPackage{translations}[%
  \@trnslt@date\space
   \@trnslt@version\space
```

```
\@trnslt@info\space (CN)]
36 \RequirePackage{cnltx-base,scrlfile}
37
39 % message handling
40 % generic help message:
41 \def\@trnslt@error@message{%
   For details have a look at the `translations' manual.%
42
43 }
45 % create message macros:
46 \cnltx@create@generic@message{@trnslt}{translations}{Error}{\@trnslt@error@message}
47 \cnltx@create@generic@message{@trnslt}{translations}{Warning}{}
48 \cnltx@create@generic@message{@trnslt}{translations}{WarningNoLine}{}
49 \cnltx@create@generic@message{@trnslt}{translations}{Info}{}
51 % specific errors:
<sub>52</sub> \newrobustcmd*\@trnslt@err@unknown@lang[1]{\@trnslt@error{Unknown language `#1'}}
53 \newrobustcmd*\@trnslt@warn@unknown@lang[1]{\@trnslt@warning{Unknown language `#1'}}
54 \newrobustcmd*\@trnslt@err@already@defined[2]{%
  \@trnslt@error{The #2 translation for `#1' is already defined.}%
<sub>56</sub> }
57 \newrobustcmd*\@trnslt@err@not@defined[2]{%
   \@trnslt@error{%
      The \@trnslt@language{#2} translation for `#1' is not defined yet.%
59
60
61 }
62 \newrobustcmd*\@trnslt@err@dict@already@defined[2]{%
   \@trnslt@error{The #2 dictionary entry for `#1' is already defined.}%
63
64 }
65 \newrobustcmd*\@trnslt@err@dict@not@defined[2]{%
    \@trnslt@error{%
66
      The \@trnslt@language{#2} dictionary entry for `#1' is not defined yet.%
67
    }%
68
69 }
71 % -----
72 % check if babel or polyglossia is used
73 \AtEndPreamble{
    \@ifpackageloaded{babel}{}{
74
      \@ifpackageloaded{polyglossia}{}
75
        {\@trnslt@info{No language package found. I am going to use `english'
76
          as default language.}}
77
   }
78
   % define \languagename if not defined yet:
   \providecommand*\languagename{english}%
   \def\@trnslt@current@language{\languagename}%
81
   % define \bbl@afterfi if not defined yet:
82
   \ifdef\bbl@afterfi{}
```

```
{\long\def\bbl@afterfi#1\fi{\fi#1}}
84
85 }
86
88 % book keeping: the following macros will be used as `etoolbox' lists that
89 % keep record of defined languages, dialects and aliases
% \newcommand*\@trnslt@languages{}% all languages
91 \newcommand*\@trnslt@aliases@pair{}% all aliases and their base
92 \newcommand*\@trnslt@aliases@single{}% all aliases
93 \newcommand*\@trnslt@dialects@pair{}% all dialects and their base
  \newcommand*\@trnslt@dialects@single{}% all dialects
95
96 %
97 % define \@trnslt@if@<name> conditionals that don't leave the checked macro as
98 % \relax behind and check for \@trnslt@<name>@#1. These conditionals should
99 % also be expandable in an \edef-like context. Thanks to e-TeX there's
100 % \ifcsname:
101 \newrobustcmd*\@trnslt@new@check[1]{%
    \csdef{@trnslt@if@#1}##1{%
      \ifcsname @trnslt@#1@##1\endcsname
103
        \expandafter\@firstoftwo
104
      \else
        \expandafter\@secondoftwo
      \fi
107
    }%
108
109 }
111
112 % leaves lowercase full expansion of #1 in the input stream (except that it
113 % doesn't, because nothing is expanded... :p)
114 \newcommand\@trnslt@get@lowercase[1]{%
    \lowercase\expandafter{\romannumeral-`\Q#1}%
115
116 }
117
    _____
119 % \DeclareLanguage
120 % #1: language
\newrobustcmd*\DeclareLanguage[1]{%
    \@trnslt@declare@language{#1}}
  \@onlypreamble\DeclareLanguage
123
124
  \newrobustcmd*\@trnslt@declare@language[1]{%
125
    \@trnslt@if@language{#1}
126
      {}{%
127
        \csdef{@trnslt@language@#1}{#1}%
128
        \listeadd\@trnslt@languages{#1}%
129
130
131 }
```

```
_{133} % get the name declared by \DeclareLanguage: the underlying name of a given
134 % language; this is not the base of a dialect!
_{135} \mbox{ } \mb
136
137 % a user-level equivalent:
138 % \newcommand*\baselanguage[1]{\@trnslt@language{#1}}
139
_{140} % define \@trnslt@if@language{#1}{}{} that actually checks the existence of
141 % \@trnslt@language@#1:
_{^{142}} \@trnslt@new@check{language}
143
144 %
145 % \DeclareLanguageDialect
146 % #1: dialect
147 % #2: language
148 \newrobustcmd*\DeclareLanguageDialect[2]{%
            \@trnslt@declare@languagedialect{#1}{#2}}
149
      \@onlypreamble\DeclareLanguageDialect
151
      \newrobustcmd*\@trnslt@declare@languagedialect[2]{%
152
           \@trnslt@if@language{#2}
153
                {}{%
154
                     \@trnslt@warn@unknown@lang{#2}%
155
                     \@trnslt@declare@language{#2}%
156
157
            \@trnslt@if@dialect{#1}
 158
                 {% => ist schon als dialect definiert => irgendwelche weiteren checks?
159
160
                {%
161
                     \@trnslt@if@alias{#2}
162
                          {%
163
                               \csedef{QtrnsltQdialectQ#1}{{\csedef{QtrnsltQalias{#2}}{#1}}
164
                               \@trnslt@declare@language{#1}%
165
                               \verb|\listeadd@trnslt@dialects@single{#1}%|
                               \listeadd\@trnslt@dialects@pair{{#1}{\@trnslt@alias{#2}}}%
167
                          }
168
                          {%
169
                               \csdef{@trnslt@dialect@#1}{{#2}{#1}}%
170
                               \@trnslt@declare@language{#1}%
171
                               \listeadd\@trnslt@dialects@single{#1}%
172
                               \listeadd\@trnslt@dialects@pair{{#1}{#2}}%
173
                          }%
174
                }%
175
176
178 % dialect equivalent of \@trnslt@language
179 \newcommand*\@trnslt@dialect[1]{\csuse{@trnslt@dialect@#1}}
180
181 % this macros fetches the base language for a given dialect, expandably:
```

```
182 \newcommand*\@trnslt@dialect@of[1]{%
     \@trnslt@if@dialect{#1}
183
       {%
184
         \expandafter\expandafter\expandafter
185
         \@firstoftwo
186
         \csname @trnslt@dialect@#1\endcsname
187
       }{}%
188
189 }
190
_{
m 191} % get the underlying name of a language or the name of the base language of a
192 % dialect:
  \newcommand*\baselanguage[1]{%
193
     \@trnslt@if@dialect{#1}
194
       {\@trnslt@language{\@trnslt@dialect@of{#1}}}
195
       {\@trnslt@language{#1}}%
196
197 }
198
199 % define \@trnslt@if@dialect{#1}{}{} that actually checks the existence of
  % \@trnslt@dialect@#1:
201 \@trnslt@new@check{dialect}
202
  % \DeclareLanguageAlias
205 % #1: alias
206 % #2: language
  \newrobustcmd*\DeclareLanguageAlias[2]{%
     \@trnslt@declare@languagealias{#1}{#2}}
   \@onlypreamble\DeclareLanguageAlias
209
210
   \newrobustcmd*\@trnslt@declare@languagealias[2]{%
     \@trnslt@if@language{#2}
212
       {}{%
213
         \@trnslt@warn@unknown@lang{#2}%
214
         \@trnslt@declare@language{#2}%
     \csletcs{@trnslt@language@#1}{@trnslt@language@#2}%
217
     \@trnslt@if@dialect{#2}
218
       {\csletcs{@trnslt@dialect@#1}{@trnslt@dialect@#2}}
220
     \ifinlist{#1}\@trnslt@aliases@single
221
       {}{%
222
         \csdef{@trnslt@alias@#1}{#2}%
223
         \left( \frac{\#1}{\#2} \right)
224
         \listeadd\@trnslt@aliases@single{#1}%
225
       }%
226
227 }
228
229 % alias equivalent of \@trnslt@language
_{230} \mbox{ } \mbox{newcommand}*\mbox{\em dtrnslt@alias[1]}{\mbox{csuse}{\mbox{\em gtrnslt@alias@#1}}}
```

```
231
_{232} % define \@trnslt@if@alias{#1}{}} that actually checks the existence of
233 % \@trnslt@alias@#1:
234 \@trnslt@new@check{alias}
235
237 % check the current language, expandably:
238 % #1: language
239 % #2: true
<sub>240</sub> % #3: false
_{241} \ \mbox{newcommand}*\ensuremath{\mbox{@trnslt@iflanguage[1]}} \
     \cnltx@braced@expanded@fully
242
     \cnltx@braced@expanded@fully
243
     \cnltx@firstofone
     \cnltx@ifstrequal
245
       {\@trnslt@language{#1}}
246
       {\@trnslt@language{\languagename}}%
247
248 }
249
250 % check the current /base/ language, expandably:
251 \newcommand*\@trnslt@ifbaselanguage[1]{%
     \@trnslt@if@dialect{\languagename}
253
         \cnltx@braced@expanded@fully
254
         \cnltx@braced@expanded@fully
255
         \cnltx@firstofone
         \cnltx@ifstrequal
257
            {\@trnslt@language{\@trnslt@dialect@of{\languagename}}}
258
            {\@trnslt@language{#1}}%
259
       {\@trnslt@iflanguage{#1}}%
261
262 }
263
264 % user commands for the above:
   \newcommand*\ifcurrentlanguage[1]{%
     \@trnslt@iflanguage{#1}%
266
267 }
268 \newcommand*\ifcurrentbaselanguage[1]{%
     \@trnslt@ifbaselanguage{#1}%
269
270 }
271
_{273} % Now that we can define languages we also want to be able to define
274 % translations:
275 % \DeclareTranslation, \NewTranslation, \RenewTranslation and
276 % \ProvideTranslation
<sub>277</sub> % #1: language
278 % #2: word
279 % #3: replacement
```

```
\newrobustcmd*\DeclareTranslation[3]{%
                    \@trnslt@declare@translation{#2}{#1}{#3}%
281
282 }
            \@onlypreamble\DeclareTranslation
283
284
           \newrobustcmd*\DeclareTranslationFallback[2]{%
285
                    \@trnslt@declare@translation{#1}{fallback}{#2}%
286
287 }
            \@onlypreamble\DeclareTranslationFallback
288
289
            \newrobustcmd*\NewTranslation[3]{%
                    \ensuremath{\mbox{\tt dtrnslt@new@translation}{\#2}{\#1}{\#3}}
291
292 }
           \@onlypreamble\NewTranslation
293
294
            \newrobustcmd*\RenewTranslation[3]{%
295
                    \@trnslt@renew@translation{#2}{#1}{#3}%
296
297 }
            \@onlypreamble\RenewTranslation
299
           \newrobustcmd*\ProvideTranslation[3]{%
300
                    \@trnslt@provide@translation{#2}{#1}{#3}%
302 }
            \@onlypreamble\ProvideTranslation
303
304
          % #1: word
           % #2: language
            % #3: replacement
307
          \newrobustcmd*\@trnslt@declare@translation[3]{%
                    \@trnslt@if@language{#2}
                            {%
310
                                     \@trnslt@if@dialect{#2}
311
                                            {%
312
                                                    \label{lem:csdef} $$ \operatorname{detokenize}{\#1}_0\operatorname{detokenize}{\#3}_{\#3}_{\%} $$
313
                                                    \@trnslt@if@word\@trnslt@dialect@of{#1}{#2}
314
315
                                                             {\csdef{@trnslt@word@\detokenize{#1}@\@trnslt@dialect@of{#2}}{#3}}%
316
317
                                             \csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef{\csdef}\csdef{\csdef}\csdef{\csdef}\csdef{\csdef}\csdef{\csdef}\csdef{\csdef}\csdef}\csdef{\csdef}\csdef}\csdef{\csdef}\csdef}\csdef}\csdef}\csdef}\csdef}\csdef}\csdef}\csdef}\csdef}\csdef}\csdef}\csdef}\csdef}\csdef}\csdef}\csdef}\csdef}\csdef{\csdef{\csdef{\csdef{\csdef{\csdef}\csdef}\csdef}\csdef}\csdef}\csdef}}}}}}}}}}}}}}}}}}}}}}
318
                                    % save the <word> as <word>:
319
                                   \csdef{@trnslt@word@\detokenize{#1}@literal}{#1}%
321
                            {\@trnslt@err@unknown@lang{#2}}%
322
323 }
324
            \newrobustcmd*\@trnslt@new@translation[3]{%
325
                    \@trnslt@if@word\@trnslt@language{#1}{#2}
326
                            {\@trnslt@err@already@defined{#1}{#2}}
327
                            {\cluster {\cluster (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (0,0), (
```

```
329 }
330
       \newrobustcmd*\@trnslt@renew@translation[3]{%
             \@trnslt@if@word\@trnslt@language{#1}{#2}
332
                   {\@trnslt@declare@translation{#1}{#2}{#3}}
333
                   {\@trnslt@err@not@defined{#1}{#2}}%
334
335
336
        \newrobustcmd*\@trnslt@provide@translation[3]{%
337
              \@trnslt@if@word\@trnslt@language{#1}{#2}
338
339
                   {\cluster {\cluster (4,0), (4,1), (4,2), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (4,3), (
340
341 }
342
343
       % let's go through some trouble to check if a translation exists:
344
       \newcommand*\@trnslt@if@word[3]{%
              \ifcsname @trnslt@word@\detokenize{#2}@#1{#3}\endcsname
                   \expandafter\@firstoftwo
347
              \else
348
                   \expandafter\@secondoftwo
349
350
351
352
        \newcommand*\@trnslt@if@translation[2]{%
353
              \@trnslt@if@word\@trnslt@language{#1}{#2}
                   {\expandafter\@firstoftwo}
355
356
                         \@trnslt@if@dialect{#2}
357
                               {%
358
                                    \@trnslt@if@word\@trnslt@dialect{#1}{#2}
359
                                          {\expandafter\@firstoftwo}
360
                                          {%
361
                                                \@trnslt@if@word\@trnslt@dialect@of{#1}{#2}
                                                      {\expandafter\@firstoftwo}
363
                                                      {\expandafter\@secondoftwo}%
364
                                          }
365
                              }
                               {\expandafter\@secondoftwo}%
367
368
369
371
       % We also need to be able to look up a translation:
373 % \GetTranslationFor and \GetTranslation
374 % these need to be expandable!
375 % #1: language
376 % #2: word
377 \newcommand*\GetTranslationFor[2]{%
```

```
\@trnslt@checkandget@translation@for{#2}{#1}}
378
379
   \newcommand*\GetTranslation[1]{%
     \@trnslt@checkandget@translation@for{#1}{\@trnslt@current@language}}
381
382
383 % those will print the translation lowercase... they're also expandable; that
384 % is: nearly...
385 %
       \DeclareTranslation{German}{foo}{Bla}
386 %
       \edef\foo{\GetLCTranslationFor{German}{foo}}
       \show\foo
387 %
       > \foo=macro:
388 %
       ->\lowercase {Bla}.
389
390 \newcommand*\GetLCTranslationFor[2]{%
     \@trnslt@get@lowercase{\@trnslt@checkandget@translation@for{#2}{#1}}%
391
392 }
393
   \newcommand*\GetLCTranslation[1]{%
394
     \@trnslt@get@lowercase{%
       \@trnslt@checkandget@translation@for{#1}{\@trnslt@current@language}%
396
     }%
397
398 }
399
  % unexpandable version of the commands that raise a warning if no translation
  % is available:
401
   \newrobustcmd*\GetTranslationForWarn[2]{%
     \@trnslt@getandwarn@translation@for{#2}{#1}%
404
405
   \newrobustcmd*\GetTranslationWarn[1]{%
     \@trnslt@getandwarn@translation@for{#1}{\@trnslt@current@language}%
408 }
409
410 \newrobustcmd*\GetLCTranslationForWarn[2]{%
     \@trnslt@getandwarn@lctranslation@for{#2}{#1}%
411
412 }
413
_{4^{14}} \mbox{ } \mbox{\ensuremath{\text{newrobustcmd}}} *\mbox{\ensuremath{\text{GetLCTranslationWarn[1]}}} \
     \@trnslt@getandwarn@lctranslation@for{#1}{\@trnslt@current@language}%
415
416 }
417
418 % #1: word #2: language
   \newcommand*\@trnslt@get@translation@for[2]{%
     \@trnslt@if@dialect{#2}
420
       {%
421
         422
           {\csuse{@trnslt@word@\detokenize{#1}@\@trnslt@dialect{#2}}}
423
           \c {\c suse {\it etrnslt@word@\detokenize{#1}@\etrnslt@dialect@of{#2}}}
424
       }
425
       \label{lem:csuse} $$ \csuse{@trnslt@word@\detokenize{#1}@\@trnslt@language{#2}}} % $$
```

```
427 }
428
      \mbox{\ensuremath{\mbox{\sf newcommand}}} \mbox{\ensuremath{\mbox{\sf wcommand}}} \mbox{\ensuremath{\mbox{\sf heavy}}} \mbox{\ensuremath{\mbox{\sf checkandget@translation@for[2]{}}} \mbox{\ensuremath{\mbox{\sf heavy}}} \mbox{\ensuremath{\mbox{\sf andget@translation@for[2]{}}} \mbox{\ensuremath{\mbox{\sf heavy}}} \mbox{\ensuremath{\mbox{\sf andget@translation@for[2]{}}} \mbox{\ensuremath{\mbox{\sf heavy}}} \mbox{\ensuremath{\mbox{\sf heavy}}} \mbox{\ensuremath{\mbox{\sf andget@translation@for[2]{}}} \mbox{\ensuremath{\mbox{\sf heavy}}} \mbox{\ensuremath{\mbox{\sf heavy}}} \mbox{\ensuremath{\mbox{\sf andget@translation@for[2]{}}} \mbox{\ensuremath{\mbox{\sf heavy}}} \mbox{\ensuremath{\mbox{\sf heavy}}}} \mbox{\ensuremath{\mbox{\sf heavy}}} 
           \@trnslt@if@translation{#1}{#2}
430
                {\@trnslt@get@translation@for{#1}{#2}}
431
                {%
432
                     \@trnslt@if@translation{#1}{fallback}
433
                         {\csuse{@trnslt@word@\detokenize{#1}@fallback}}
434
                         {\csuse{@trnslt@word@\detokenize{#1}@literal}}%
435
436
437
438
      % this is not expandable!
439
      \newrobustcmd*\@trnslt@getandwarn@translation@for[2]{%
           \@trnslt@if@translation{#1}{#2}
441
                {\@trnslt@get@translation@for{#1}{#2}}
442
443
                     \@trnslt@warning{Translation for `#1' in #2 unknown. You may try to use
444
                         \string\DeclareTranslation{#2}{#1}{ ... } in your preamble.}%
445
                     \@trnslt@if@translation{#1}{fallback}
446
                         {%
447
                              \@trnslt@info{Using fallback translation for `#1'}%
                              \csuse{@trnslt@word@\detokenize{#1}@fallback}
449
                         }
450
                         {\csuse{@trnslt@word@\detokenize{#1}@literal}}%
451
                }%
452
453
454
      % lowercase version for translation with warnings:
455
      \@trnslt@if@translation{#1}{#2}
457
                {\@trnslt@get@lowercase{\@trnslt@get@translation@for{#1}{#2}}}
458
                {%
459
                     \@trnslt@warning{Translation for `#1' in #2 unknown. You may try to use
                         \string\DeclareTranslation{#2}{#1}{ ... } in your preamble.}%
461
                     \@trnslt@if@translation{#1}{fallback}
462
                         {%
463
                              \ensuremath{\tt (Using fallback translation for `#1'}%
                              \@trnslt@get@lowercase{\csuse{@trnslt@word@\detokenize{#1}@fallback}}%
465
466
                         }%
468
469 }
470
      % no idea if the following ones really are needed... let's define them
474 % \SaveTranslationFor and \SaveTranslation
475 \newrobustcmd*\SaveTranslationFor[3]{%
```

```
\@trnslt@save@translation@for{#1}{#3}{#2}%
476
477 }
  \newrobustcmd*\SaveTranslation[2]{%
479
     \@trnslt@save@translation@for{#1}{#2}{\@trnslt@current@language}%
480
481 }
482
   \newrobustcmd*\@trnslt@save@translation@for[3]{%
483
     \edef#1{%
484
       \@trnslt@if@translation{#2}{#3}
485
         \c {\c suse {\it otrnslt@word@\detokenize{#2}@\etrnslt@language{#3}}}
487
     }%
488
489 }
490
491
  % The basics are set. What's missing? Right: dictionaries! Those will be files
   % that contain translations for a specific language.
   % load dictionaries and check for existing ones:
495
  % \LoadDictionary and \LoadDictionaryFor
  \newrobustcmd*\LoadDictionary[1]{%
     \@trnslt@load@dictionary@for{#1}{\@trnslt@current@language}}
498
   \@onlypreamble\LoadDictionary
499
500
  \newrobustcmd*\LoadDictionaryFor[2]{%
     \@trnslt@load@dictionary@for{#2}{#1}}
  \@onlypreamble\LoadDictionaryFor
503
504
  % #1: name
506 % #2: lang
  \newrobustcmd*\@trnslt@load@dictionary@for[2]{%
507
     \AtBeginDocument{%
508
       \InputIfFileExists{#1-\@trnslt@language{#2}.trsl}
         {\@trnslt@check@dictionary{#1}{#2}}
510
         {%
511
           \@trnslt@warning{dictionary file `#1-\@trnslt@language{#2}.trsl' not
512
             found.}%
513
         }%
514
     }%
515
516 }
517
   \newrobustcmd*\@trnslt@check@dictionary[2]{%
518
     \AfterFile{#1-\@trnslt@language{#2}.trsl}
519
520
         \ifcsdef{@trnslt@dictionary@#1@\@trnslt@language{#2}}
521
           {\@trnslt@info{loading dictionary `#1' for `#2'.}}
522
           {%
523
             \@trnslt@warning{file `#1-\@trnslt@language{#2}.trsl' does not
```

```
appear to be a dictionary}%
525
                         }%
526
               }%
528 }
529
      \newcommand*\@trnslt@if@dictionary[2]{\IfFileExists{#1-#2.trsl}}
531
      \newcommand*\@trnslt@load@dictionary@silent@for[2]{\InputIfFileExists{#1-#2.trsl
532
534
       % the contents of a dictionary; let's declare that is one.
535
536 \newrobustcmd*\ProvideDictionaryFor[2]{%
           \@trnslt@provide@dictionary@for{#1}{#2}}
      \@onlypreamble\ProvideDictionaryFor
538
539
      \newrobustcmd*\@trnslt@provide@dictionary@for[2]{%
540
           \def\@trnslt@dictionary@name{#2}%
           \edef\@trnslt@dictionary@lang{\@trnslt@language{#1}}%
542
           % this macro can be used to check if we have a dictionary and will also be
543
           % used as a list for the dictionary entries:
           \label{lem:csdef} $$\operatorname{dictionary@\ensited}({\tt dictionary@\ensited})^{\ensited} $$
545
           \@ifnextchar[
546
                {\@trnslt@provide@dictionary@version}
547
548
                     \ProvidesFile
549
                          {#2-\@trnslt@dictionary@lang.trsl}%
550
                          [(\@trnslt@dictionary@lang\space translation file `#2')]
551
                }%
552
553 }
554
      \protected\def\@trnslt@provide@dictionary@version[#1]{%
555
           \ProvidesFile
556
                {\tt \{\enslipsymbol{\colored} etrnslt\colored} \enslipsymbol{\colored} \{\enslipsymbol{\colored} \enslipsymbol{\colored} \enslipsymbol{\colored} \{\enslipsymbol{\colored} \enslipsymbol{\colored} \enslipsymbol{\colored} \enslipsymbol{\colored} \}\enslipsymbol{\colored} \}\enslipsymbol{\colored} \enslipsymbol{\colored} \en
557
                [(\@trnslt@dictionary@lang\space translation file `\@trnslt@dictionary@name')
558
          #1]}
559
      % change this test (we can't use braces inside the item with \ifinlist):
       \newcommand*\@trnslt@check@dictionary@entry[2]{%
561
           \cnltx@ifinlistcs
562
                {{#1}{#2}}
                {@trnslt@dictionary@\@trnslt@dictionary@name @\@trnslt@dictionary@lang}%
564
565 }
566
     \newrobustcmd*\@trnslt@add@dictionary@entry[2]{%
567
           \listcsadd
                {@trnslt@dictionary@\@trnslt@dictionary@name @\@trnslt@dictionary@lang}
569
                {{#1}{#2}}%
570
571 }
```

```
572
573 %
      % now we should be able to add translations without repeatedly type the
       % language ...
       \newrobustcmd*\NewDictTranslation[2]{%
            \@trnslt@check@dictionary@entry{#1}{#2}
                 {\@trnslt@err@dict@already@defined{#1}{#2}}%
579
                       \@trnslt@add@dictionary@entry{#1}{#2}
580
                       \@trnslt@new@translation{#1}{\@trnslt@dictionary@lang}{#2}%
581
582
583 }
       \@onlypreamble\NewDictTranslation
584
585
       \newrobustcmd*\RenewDictTranslation[2]{%
            \@trnslt@check@dictionary@entry{#1}{#2}
587
                 {\@trnslt@renew@translation{#1}{\@trnslt@dictionary@lang}{#2}}
588
                 {\ensuremath{\mbox{\tt @trnslt@err@dict@not@defined}{\#1}{\#2}}}
589
590 }
       \@onlypreamble\RenewDictTranslation
591
592
       \newrobustcmd*\DeclareDictTranslation[2]{%
            \@trnslt@check@dictionary@entry{#1}{#2}
594
595
                 {\@trnslt@add@dictionary@entry{#1}{#2}}%
596
            \@trnslt@declare@translation{#1}{\@trnslt@dictionary@lang}{#2}%
598 }
       \@onlypreamble\DeclareDictTranslation
599
600
       \newrobustcmd*\ProvideDictTranslation[2]{%
            \@trnslt@check@dictionary@entry{#1}{#2}
602
                 {}
603
                 {%
604
                       \@trnslt@add@dictionary@entry{#1}{#2}%
                       \@trnslt@provide@translation{#1}{\@trnslt@dictionary@lang}{#2}%
607
608 }
       \@onlypreamble\ProvideDictTranslation
610
611 %
_{612} % last not least let's inspect which entries a dictionary contains of:
613 % \PrintDictionaryFor
614 % #1: lang
615 % #2: name
616 % #3: pre
617 % #4: mid
618 % #5: post
619 \newcommand*\PrintDictionaryFor[5]{%
           \ensuremath{\mbox{\mbox{$d$}}}{\mbox{\mbox{$d$}}}{\mbox{\mbox{$d$}}}{\mbox{\mbox{$d$}}}{\mbox{\mbox{$d$}}}{\mbox{\mbox{$d$}}}{\mbox{\mbox{$d$}}}{\mbox{\mbox{$d$}}}{\mbox{\mbox{$d$}}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\mbox{$d$}}{\
```

```
621 }
622
623 % #1: lang
624 % #2: name
625 % #3: pre
626 % #4: mid
627 % #5: post
_{628} \mbox{ } \mbox{newcommand}*\mbox{\em original} \mbox{\em original} \
    \forlistcsloop
629
      {\@trnslt@print@dictionary@entry{#3}{#4}{#5}}
      {\colored{ctrnslt@dictionary@#2@\colored{ctrnslt@language{#1}}}
631
632 }
633
634 % #1: pre
635 % #2: mid
636 % #3: post
637 % #4: (key)(translation)
638 \newcommand*\@trnslt@print@dictionary@entry[4]{%
    \@trnslt@print@dictionary@entry@aux{#1}{#2}{#3}#4%
640 }
641
642 % #1: pre
643 % #2: mid
644 % #3: post
645 % #4: key
646 % #5: translation
647 \newcommand*\@trnslt@print@dictionary@entry@aux[5]{#1#4#2#5#3}
648
649 % -----
_{650} % Now that the package is finished let's us ethe above commands to provide a
651 % basis for usage; we need all languages known to `babel' and `polyglossia'
652 % as well as aliases to allow different spellings/names; we also need dialects
653 % where it makes sense (e.g. British as a dialect of English)
656 % dummy language `fallback' -- it is needed for the whole mechansim provided
657 % earlier (\DeclareFallbackTranslation...)
658 \DeclareLanguage{fallback}
659 \DeclareLanguageAlias{Fallback}{fallback}
660
661 %
662 % predefined languages
663 \DeclareLanguage{afrikaans}
664 \DeclareLanguage{albanian}
665 \DeclareLanguage{amharic}
666 \DeclareLanguage{arabic}
667 \DeclareLanguage{armenian}
668 \DeclareLanguage{asturian}
669 \DeclareLanguage{basque}
```

```
670 \DeclareLanguage{bengali}
671 \DeclareLanguage{breton}
672 \DeclareLanguage{bulgarian}
673 \DeclareLanguage{catalan}
674 \DeclareLanguage{coptic}
675 \DeclareLanguage{czech}
676 \DeclareLanguage{danish}
677 \DeclareLanguage{dutch}
678 \DeclareLanguage{english}
679 \DeclareLanguage{esperanto}
680 \DeclareLanguage{estonian}
681 \DeclareLanguage{ethiop}
682 \DeclareLanguage{farsi}
683 \DeclareLanguage{finnish}
684 \DeclareLanguage{french}
685 \DeclareLanguage{friulan}
686 \DeclareLanguage{gaelic}
687 \DeclareLanguage{galician}
688 \DeclareLanguage{german}
689 \DeclareLanguage{greek}
690 \DeclareLanguage{hebrew}
691 \DeclareLanguage{hindustani}
692 \DeclareLanguage{hungarian}
693 \DeclareLanguage{icelandic}
694 \DeclareLanguage{interlingua}
695 \DeclareLanguage{italian}
696 \DeclareLanguage{japanese}
697 \DeclareLanguage{kannada}
698 \DeclareLanguage{korean}
699 \DeclareLanguage{ladin}
700 \DeclareLanguage{lao}
701 \DeclareLanguage{latin}
702 \DeclareLanguage{latvian}
703 \DeclareLanguage{lithuanian}
704 \DeclareLanguage{malay}
705 \DeclareLanguage{malayalam}
706 \DeclareLanguage{maldivian}
707 \DeclareLanguage{marathi}
708 \DeclareLanguage{mongolian}
709 % polyglossia seems to support this one but it is unclear which language is
710 % actually meant by it:
711 % \DeclareLanguage{nko}
712 \DeclareLanguage{norwegian}
713 \DeclareLanguage{occitan}
714 \DeclareLanguage{piedmontese}
715 \DeclareLanguage{pinyin}
716 \DeclareLanguage{polish}
717 \DeclareLanguage{portuges}
718 \DeclareLanguage{romanian}
```

```
719 \DeclareLanguage{romansh}
720 \DeclareLanguage{russian}
721 \DeclareLanguage{samin}
722 \DeclareLanguage{sanskrit}
723 \DeclareLanguage{serbocroatian}
724 \DeclareLanguage{slovak}
725 \DeclareLanguage{slovenian}
726 \DeclareLanguage{sorbian}
727 % not sure about this: isn't it either a Spanish or English dialect?
728 \DeclareLanguage{spanglish}
729 \DeclareLanguage{spanish}
730 \DeclareLanguage{swedish}
_{731} % polyglossia seems to support this one but it is unclear which language is
732 % actually meant by it:
733 % \DeclareLanguage{syriac}
734 \DeclareLanguage{tamil}
735 \DeclareLanguage{telugu}
736 \DeclareLanguage{thai}
737 \DeclareLanguage{tibetan}
738 \DeclareLanguage{turkish}
739 \DeclareLanguage{turkmen}
740 \DeclareLanguage{ukrainian}
741 \DeclareLanguage{vietnamese}
  \DeclareLanguage{welsh}
743
745 % aliases and dialects:
746 \DeclareLanguageAlias {Afrikaans}{afrikaans}
747 \DeclareLanguageAlias {Albanian}{albanian}
748 \DeclareLanguageAlias {Amharic}{amharic}
749 \DeclareLanguageAlias {Arabic}{arabic}
750 \DeclareLanguageAlias {Armenian}{armenian}
751 \DeclareLanguageAlias {Asturian}{asturian}
752 \DeclareLanguageAlias {astur-leonese}{asturian}
  \DeclareLanguageAlias {Astur-Leonese} {astur-leonese}
754 \DeclareLanguageAlias
                          {asturian-leonese}{asturian}
755 \DeclareLanguageAlias
                          {Asturian-Leonese}{asturian-leonese}
756 \DeclareLanguageAlias {Basque}{basque}
757 \DeclareLanguageAlias {Bengali}{bengali}
758 \DeclareLanguageAlias {Breton}{breton}
759 \DeclareLanguageAlias {Bulgarian}{bulgarian}
760 \DeclareLanguageAlias {Catalan}{catalan}
761 \DeclareLanguageAlias {Coptic}{coptic}
762 \DeclareLanguageAlias {coptic egyptian}{coptic}
763 \DeclareLanguageAlias {Coptic Egyptian}{coptic egyptian}
764 \DeclareLanguageAlias {Czech}{czech}
765 \DeclareLanguageAlias {Danish}{danish}
766 \DeclareLanguageAlias {Dutch}{dutch}
767 \DeclareLanguageAlias {Farsi}{farsi}
```

```
768 \DeclareLanguageAlias {Finnish}{finnish}
769 \DeclareLanguageAlias {français}{french}
  \DeclareLanguageAlias {Français}{français}
  \DeclareLanguageDialect{canadien}{french}
  \DeclareLanguageAlias {Canadien}{canadien}
  \DeclareLanguageAlias {French}{french}
  \DeclareLanguageDialect{acadian}{french}
  \DeclareLanguageAlias {Acadian}{acadian}
  \DeclareLanguageAlias {frenchle}{french}
  \DeclareLanguageDialect{american}{english}
  \DeclareLanguageAlias {American}{american}
  \DeclareLanguageDialect{australian}{english}
  \DeclareLanguageAlias {Australian}{australian}
781 \DeclareLanguageDialect{british}{english}
782 \DeclareLanguageAlias {British}{british}
  \DeclareLanguageDialect{canadian}{english}
  \DeclareLanguageAlias {Canadian}{canadian}
  \DeclareLanguageAlias {English}{english}
  \DeclareLanguageAlias {UKenglish}{british}
  \DeclareLanguageAlias
                         {USenglish}{american}
  \DeclareLanguageDialect{newzealand}{english}
789 \DeclareLanguageAlias {Newzealand}{newzealand}
  \DeclareLanguageAlias {Ethiop}{ethiop}
  \DeclareLanguageAlias {Esperanto}{esperanto}
  \DeclareLanguageAlias {Estonian}{estonian}
  \DeclareLanguageAlias {Friulan}{friulan}
  \DeclareLanguageAlias {Gaelic}{gaelic}
  \DeclareLanguageDialect{irish}{gaelic}
  \DeclareLanguageDialect{scottish}{gaelic}
  \DeclareLanguageAlias {Irish}{irish}
798 \DeclareLanguageAlias {irish gaelic}{irish}
  \DeclareLanguageAlias {Irish Gaelic}{irish}
800 \DeclareLanguageAlias {Scottish}{scottish}
801 \DeclareLanguageAlias
                         {scottish gaelic}{scottish}
  \DeclareLanguageAlias
                          {Scottish Gaelic}{scottish}
  \DeclareLanguageAlias
                          {Galician}{galician}
804 \DeclareLanguageAlias
                          {German}{german}
805 \DeclareLanguageAlias
                          {germanb}{german}
  \DeclareLanguageAlias
                        {ngerman}{german}
807 \DeclareLanguageDialect{austrian}{german}
808 \DeclareLanguageAlias {Austrian}{austrian}
                         {naustrian}{austrian}
809 \DeclareLanguageAlias
810 \DeclareLanguageAlias
                          {Greek}{greek}
811 \DeclareLanguageAlias
                          {polutonikogreek}{greek}
812 \DeclareLanguageAlias
                         {ibygreek}{greek}
813 \DeclareLanguageAlias
                         {bgreek}{greek}
814 \DeclareLanguageAlias
                         {Hebrew}{hebrew}
815 \DeclareLanguageAlias
                          {Hindustani}{hindustani}
816 \DeclareLanguageAlias {hindi-urdu}{hindustani}
```

```
817 \DeclareLanguageAlias {Hindi-Urdu}{hindi-urdu}
818 \DeclareLanguageDialect{hindi}{hindustani}
  \DeclareLanguageAlias {Hindi}{hindi}
  \DeclareLanguageDialect{urdu}{hindustani}
  \DeclareLanguageAlias
                          {Urdu}{urdu}
  \DeclareLanguageAlias
                          {Hungarian}{hungarian}
  \DeclareLanguageAlias
                          {magyar}{hungarian}
  \DeclareLanguageAlias
                          {Magyar}{magyar}
  \DeclareLanguageAlias
                          {Icelandic}{icelandic}
  \DeclareLanguageAlias
                          {Interlingua}{interlingua}
827 \DeclareLanguageAlias
                          {Italian}{italian}
828 \DeclareLanguageAlias
                          {Japanese}{japanese}
829 \DeclareLanguageAlias
                          {Kannada}{kannada}
830 \DeclareLanguageAlias
                          {Korean}{korean}
831 \DeclareLanguageAlias
                          {Ladin}{ladin}
832 \DeclareLanguageAlias
                          {Lao}{lao}
  \DeclareLanguageAlias
                          {laotian}{lao}
  \DeclareLanguageAlias
                          {Laotian}{laotian}
  \DeclareLanguageAlias
                          {Latin}{latin}
  \DeclareLanguageAlias
                          {Latvian}{latvian}
837 \DeclareLanguageAlias
                          {lettish}{latvian}
838 \DeclareLanguageAlias
                          {Lettish}{lettish}
  \DeclareLanguageAlias {Lithuanian}{lithuanian}
  % hopefully someone who knows better than me can comment on these
841 \DeclareLanguageAlias {Malay}{malay}
  \DeclareLanguageDialect{indonesian}{malay}
  \DeclareLanguageAlias {Indonesian}{indonesian}
844 \DeclareLanguageAlias
                          {indon}{indonesian}
845 \DeclareLanguageAlias
                          {bahasa meyalu}{malay}
846 \DeclareLanguageAlias
                          {Bahasa Meyalu}{bahasa meyalu}
847 \DeclareLanguageAlias
                          {bahasa}{bahasa meyalu}
848 \DeclareLanguageAlias
                          {Bahasa}{bahasa}
849 \DeclareLanguageAlias
                          {bahasai}{bahasa}
                          {bahasam}{bahasa}
850 \DeclareLanguageAlias
  \DeclareLanguageAlias
                          {Malayalam}{malayalam}
                           {Maldivian}{maldivian}
852 \DeclareLanguageAlias
853 \DeclareLanguageAlias
                          {divehi}{maldivian}
  \DeclareLanguageAlias
                          {Divehi}{divehi}
  \DeclareLanguageAlias
                          {Marathi}{marathi}
856 \DeclareLanguageAlias
                          {Mongolian}{mongolian}
  % \DeclareLanguageAlias
                            {Syriac}{syriac}
  \DeclareLanguageAlias
                          {norsk}{norwegian}
  \DeclareLanguageAlias
                          {Norsk}{norsk}
  \DeclareLanguageAlias
                          {Norwegian}{norwegian}
861 \DeclareLanguageAlias
                          {nynorsk}{norwegian}
862 \DeclareLanguageAlias
                          {Nynorsk}{nynorsk}
863 \DeclareLanguageAlias
                          {Occitan}{occitan}
864 \DeclareLanguageAlias
                          {lenga d'oc}{occitan}
865 \DeclareLanguageAlias {langue d'oc}{occitan}
```

```
866 \DeclareLanguageAlias
                          {Piedmontese}{piedmontese}
867 \DeclareLanguageAlias
                          {piemontese}{piedmontese}
                          {Piemontese}{piemontese}
  \DeclareLanguageAlias
  \DeclareLanguageAlias
                          {piemonteis}{piedmontese}
  \DeclareLanguageAlias
                          {Piemonteis}{piemonteis}
871 \DeclareLanguageAlias
                          {Pinyin}{pinyin}
  \DeclareLanguageAlias
                          {Polish}{polish}
  \DeclareLanguageDialect{brazil}{portuges}
  \DeclareLanguageAlias
                          {Brazil}{brazil}
875 \DeclareLanguageAlias
                          {brazilian}{brazil}
876 \DeclareLanguageAlias
                          {Brazilian}{brazilian}
  \DeclareLanguageAlias
                          {Portuges}{portuges}
  \DeclareLanguageAlias
                          {portuguese}{portuges}
879 \DeclareLanguageAlias
                          {Portuguese}{portuguese}
880 \DeclareLanguageAlias
                          {Romanian}{romanian}
881 \DeclareLanguageAlias
                          {Romansh}{romansh}
  \DeclareLanguageAlias
                          {Romansch}{romansh}
  \DeclareLanguageAlias
                          {Rumantsh}{romansh}
  \DeclareLanguageAlias
                          {Rumantsch}{romansh}
   \DeclareLanguageAlias
                          {Romanche}{romansh}
  \DeclareLanguageAlias
                          {Russian}{russian}
887 \DeclareLanguageAlias
                          {Samin}{samin}
888 \DeclareLanguageAlias
                          {north sami){samin}
  \DeclareLanguageAlias
                          {North Sami}{north sami}
  \DeclareLanguageAlias
                          {northern sami}{north sami}
                          {Northern Sami}{northern sami}
  \DeclareLanguageAlias
  \DeclareLanguageAlias
                          {Sanskrit}{sanskrit}
   % this one isn't needed, or is it? vvv
894 \DeclareLanguageAlias {Serbocroatian}{serbocroatian}
  \DeclareLanguageAlias {serbo-croatian}{serbocroatian}
  \DeclareLanguageAlias {Serbo-Croatian}{serbocroatian}
  \DeclareLanguageDialect{serbian}{serbocroatian}
  \DeclareLanguageAlias {Serbian}{serbian}
  \DeclareLanguageAlias {serbianc}{serbian}
  \DeclareLanguageDialect{croatian}{serbocroatian}
  \DeclareLanguageAlias
                          {Croatian}{croatian}
902 \DeclareLanguageAlias
                          {Slovak}{slovak}
  \DeclareLanguageAlias
                          {Slovenian}{slovenian}
  \DeclareLanguageAlias {Sorbian}{sorbian}
  \DeclareLanguageDialect{lowersorbian}{sorbian}
  \DeclareLanguageDialect{uppersorbian}{sorbian}
  \DeclareLanguageAlias {Lowersorbian} {lowersorbian}
  \DeclareLanguageAlias
                          {Uppersorbian}{uppersorbian}
  \DeclareLanguageAlias
                          {lsorbian}{lowersorbian}
910 \DeclareLanguageAlias
                          {usorbian}{uppersorbian}
911 \DeclareLanguageAlias
                          {lower sorbian}{lowersorbian}
912 \DeclareLanguageAlias
                          {upper sorbian}{uppersorbian}
913 \DeclareLanguageAlias
                          {Lower Sorbian}{lowersorbian}
914 \DeclareLanguageAlias {Upper Sorbian}{uppersorbian}
```

```
915 \DeclareLanguageAlias {Spanglish}{spanglish}
916 \DeclareLanguageAlias {Spanish}{spanish}
917 \DeclareLanguageAlias {Swedish}{swedish}
918 \DeclareLanguageDialect{swissgerman}{german}
  % this is to be discussed: swiss could also be an alias of french, italian or
920 % romansh:
921 \DeclareLanguageAlias {swiss}{swissgerman}
922 \DeclareLanguageAlias {Swiss}{swiss}
923 \DeclareLanguageAlias {Swissgerman}{swissgerman}
924 \DeclareLanguageAlias {swiss german}{swissgerman}
925 \DeclareLanguageAlias {Swiss German}{swiss german}
926 \DeclareLanguageAlias {Tamil}{tamil}
927 \DeclareLanguageAlias {Telugu}{telugu}
928 \DeclareLanguageAlias {Thai}{thai}
929 \DeclareLanguageAlias {thaicjk}{thai}
930 \DeclareLanguageAlias {Thaicjk}{thaicjk}
931 \DeclareLanguageAlias {Tibetan}{tibetan}
932 \DeclareLanguageAlias {Turkish}{turkish}
933 \DeclareLanguageAlias {Turkmen}{turkmen}
934 \DeclareLanguageAlias {Ukrainian}{ukrainian}
935 \DeclareLanguageAlias {Vietnamese}{vietnamese}
936 \DeclareLanguageAlias {Welsh}{welsh}
937
    ______
938
  % OK, we have everything, do we? No, wait: let's load the basic dictionary
  % that is part of this package if it is available for the document language
    ______
  % load basic dictionary if available
942
<sub>943</sub> \AtBeginDocument{%
    \@trnslt@if@dialect{\@trnslt@current@language}
944
945
        \@trnslt@if@dictionary
946
          {translations-basic-dictionary}
          {%
949
           \@trnslt@load@dictionary@silent@for
950
             {translations-basic-dictionary}
951
             {\@trnslt@language{\@trnslt@current@language}}%
952
         }%
953
          {%
954
           \@trnslt@load@dictionary@silent@for
955
             {translations-basic-dictionary}
956
             {\@trnslt@dialect@of{\@trnslt@current@language}}%
957
         }
958
      }
        \@trnslt@load@dictionary@silent@for
961
          {translations-basic-dictionary}
962
```

```
}%
964
965 }
   \endinput
968
   % HTSTORY:
_{971} 2012/09/30 v0.2beta - first version (as part of the `exsheets' bundle)
                       - \LoadDictionary and \LoadDictionaryFor added and loads of
<sub>972</sub> 2012/10/05 v0.2
                         languages defined.
  2013/03/10 v0.8
                       - basic dictionaries for English, German, French and Spanish
974
                       - new command \DeclareDictTranslation
975
<sub>976</sub> 2013/04/04 v0.8a
                       - bug fix in \DeclareDictTranslation
977 2013/04/07 v0.9
                       - slightly improved messages
978 2013/04/08 v0.9a
                       - changed fallback warning into info
                       - synchronized version number with `exsheets' until now but
979
                         won't any more
980
981 2013/06/22 v0.9b
                       - added Swiss
  2013/06/28 v0.10
                       - declaring aliases of dialects now works as expected
                       - declarings dialects of an alias now correctly declares
983
                         the dialect to the correct base language
984
                       - corrected a few erroneous language declarations
985
   2013/07/12 v0.10a
                       - \GetTranslation gets two-folded fallback: use
                         fallback-translation if no translation for the current
987
                         language has been defined; use literal string if /no/
988
                         language is used - this should never happen but /will/
                         happen if neither `babel' nor `polyglossia' have been
990
                         loaded, i.e., no language has been chosen /and/ the
991
                         package writer did not provide an English translation
   2013/07/16 v1.0
                       - removed from `exsheets' bundle - `translations' should
                         be a package of it's own
994
                       - load basic dictionary automatically if available
995
                       - rudimentary check in \LoadDictionary if loaded file is a
                         dictionary
                       - new command \PrintDictionaryFor
998
                         redefined conditionals; they still seemed to make
999
                         trouble in some cases
1000
1001 2013/08/05 v1.1
                       - added /loads/ of languages, now the list of babel and
                         polyglossia languages hopefully is complete
1002
                       - a few languages had falsely been declared as dialect
1003
                         instead of an alias
                       - added weekday names and month names to basic dictionary
                         new command \baselanguage
1006
                         new commands \GetLCTranslation, \GetLCTranslationFor,
1007
                         \GetLCTranslationWarn and \GetLCTranslationForWarn
1008
                       - load basic dictionary also for dialects and if it
1009
                         doesn't exist load it for the corresponding base
1010
                         language instead
1011
1012 2013/09/30 v1.1a
                       - Bug fix in \NewTranslation und \RenewTranslation
```

1013 2014/01/10 v1.2	- \ifcurrentlanguage, \ifcurrentbaselanguage
1014	- require cnltx-base
1015	- change the `no language package' warning into an info
1016	- \ProvideTranslation
1017	<ul> <li>NewDictTranslation, \RenewDictTranslation,</li> </ul>
1018	\ProvideDictTranslation
1019	- translations in dictionaries are provided
1020	- \baselanguagename
1021 2014/01/23 v1.2a	<pre>- add  so that translation keys with</pre>
1022	non-ascii chars can safely be used
1023	- fix bug in dialect declaration
1024	- rename \baselanguagename => \baselanguage
1025	- drop earlier \baselanguage (it was and still is
1026	available as \@trnslt@language)
1027 2015/07/09 v1.2b	- add language `korean'

## **Bibliography**

- [Bra13] Johannes Braams, current maintainer: Javier Bezos. babel. version 3.9f, May 16, 2013.
  URL: http://mirror.ctan.org/macros/latex/required/babel/.
- [Cha13] François CHARETTE, current maintainer: Arthur REUTENAUER. polyglossia. version 1.33.4, June 27, 2013.

  URL: http://mirror.ctan.org/macros/latex/contrib/polyglossia/.
- [KN12] Markus KOHM and Frank NEUKAHM. KOMA-Script. version 3.11b, July 29, 2012. URL: http://mirror.ctan.org/macros/latex/contrib/koma-script/.
- [Nie14] Clemens NIEDERBERGER. cnltx. version o.10a, Jan. 23, 2014. URL: http://mirror.ctan.org/macros/latex/contrib/cnltx/.
- [Tan10] Till TANTAU. translator. version 1.0, June 12, 2010.

  URL: http://mirror.ctan.org/macros/contrib/beamer/base/translator/.

### Index

В	37	\GetLCTranslationForWarn4
babel (package) 1 f., 4-7, 14, 17	\DeclareLanguage3, 5, 9, 19, 30 ff.	\GetLCTranslationWarn5
\baselanguage 6, 21, 37	\DeclareLanguageAlias3, 21, 30,	\GetTranslation 2, 4, 6 ff., 25, 37
Bezos, Javier	32-36	$\GetTranslationFor4, 6 f., 24$
Braams, Johannes	\DeclareLanguageDialect3, 20,	\GetTranslationForWarn 4
	33-36	\GetTranslationWarn4
C	\DeclareTranslation.4,7f.,23,26	
CHARETTE, François 1	\DeclareTranslationFallback4,	I
cnltx (bundle) 2	7 f., 23	\ifcurrentbaselanguage 6
cnltx-base (package)2		\ifcurrentlanguage6
	G	
D	\GetLCTranslation4	K
\DeclareDictTranslation5, 10, 29,	\GetLCTranslationFor4	Конм, Markus 2

## INDEX

KOMA-Script (bundle) 2	Niederberger, Clemens 2	\RenewTranslation4, 23, 37
		REUTENAUER, Arthur 1
L	P	
\LoadDictionary5, 9, 27, 37	polyglossia (package) 1 f., 7, 14, 17	S
\LoadDictionaryFor 5, 9, 27, 37	\PrintDictionaryFor5	\SaveTranslation 5 f., 27
LPPL2	\ProvideDictionaryFor5, 9 f., 28	$\SaveTranslationFor5 f., 26$
	\ProvideDictTranslation5, 9 f., 29	scrlfile (package) 2
N	\ProvideTranslation4	
Neukahm, Frank 2		T
$\verb \NewDictTranslation$	R	Tantau, Till
\NewTranslation3, 23, 37	\RenewDictTranslation 5, 10	translator (package) 1 f.