



COPADATA
do it your way

zenon manual

Language switch

v.7.20





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Contents

1. Welcome to COPA-DATA help	4
2. Language switch	4
3. Language switchable texts	5
4. Language switch detail view toolbar and context menu	8
5. Keywords	10
6. Language table	11
6.1 Create new language file.....	12
6.2 Display and handling	13
6.2.1 Search	15
6.2.2 Replace	16
6.3 Key words in the language table	17
7. Edit language files externally	19
7.1 Export and import language files	20
7.2 Editing in text file	22
7.3 Editing in MS Excel	22
8. Fonts.....	23
9. Pre-defined keywords - system text in CEL	24
10. Paths for language switch of the Runtime help	25
11. Evacuating translations.....	27
12. Function Language switch	27

1. Welcome to COPA-DATA help

GENERAL HELP

If you cannot find any information you require in this help chapter or can think of anything that you would like added, please send an email to documentation@copadata.com (<mailto:documentation@copadata.com>).

PROJECT SUPPORT

You can receive support for any real project you may have from our Support Team, who you can contact via email at support@copadata.com (<mailto:support@copadata.com>).

LICENSES AND MODULES

If you find that you need other modules or licenses, our staff will be happy to help you. Email sales@copadata.com (<mailto:sales@copadata.com>).

2. Language switch

This functionality is essential for the realization of international projects. For example when:

- ▶ Delivering a project in different languages
- ▶ central services, which can be accessed from different countries
- ▶ Decentral equipment, which can be accessed worldwide
- ▶ language switchable operation of equipment

The language change function allows the language of text information to be switched between different languages in the Runtime. For project configuration, a language table (on page 11) has been created in the detail view of the `Language file` node.



License information

Part of the standard license of the Editor and Runtime.

CONTEXT MENU PROJECT MANAGER

Menu item	Action
New language file...	Opens the dialog for creating a new language file.
Editor profile	Opens the drop-down list with predefined editor profiles.
Help	Opens online help.

3. Language switchable texts

Language switching can be used for:

- ▶ texts displayed in the Runtime:
E.g. limit texts, variable identification.
- ▶ Fonts:
e. g. Arial Unicode.
- ▶ Texts in AML, CEL and IPA:
Status texts and system messages in the Alarm Message List, Chronological Event List and in the Industrial Performance Analyzer
- ▶ Alarm/event groups, alarm/event classes:
Group and class names.
- ▶ Runtime dialogs:
e.g. Standard login window, alarm filter dialog.
- ▶ Runtime help:
The entire Runtime help is language switchable (Preparatory work for language switchable help).
- ▶ List path:
Switching of texts for a screen of the screen type `List` or HTML pages for screen type `HTML`.
- ▶ Media path:
Switching of folders for graphics files, help, multimedia, texts ,formats and Report Viewer.
- ▶ S7 graph function chart:
Switching of dynamic and static elements.

The language change function supports:

Parameters	Description
Graphical elements	Text
	Link Text
	Text button
	Multi-binary element
	Combined element
	Universal slider
	ComboListBox
Variables	Identification (Name is not changeable)
	Unit
	Limit text The dynamic limit text makes it possible to insert the current value of a variable into the limit text of another variable. At this fixed text can be linked via an index with keywords from a language file. For details see: Dynamic limit text and Using keywords in text lists in manual Variables.
Screens	Screen name
Standard recipes	Recipe name
Menus	Menus
Report Generator	Standard Texts
IPA	Texts
Alarm administration/ Chronologic Event List	List headlines (column labels), alarm/event groups and alarm/event classes name
Archive Revision	Table headline (Name of the column)
Runtime	Dialogs in the Runtime
Reaction matrices	Limit value text
Tooltips	Everywhere where signature texts for dynamic elements were defined.
Signatur texts	Everywhere where tooltips can be used

THE FOLLOWING ARE NOT LANGUAGE SWITCHABLE:

Type	Description
Variables	Variable name (the Variable identification is language switchable), String alternate value
Functions	Function name

Fonts	Name
Frames	Name
Drivers	Name (can be set during driver selection)
Data types	Name
Reaction matrices	Name
Allocations	Name
Script	Name
Archive	Description
Time control	Name
Process Control Engine (PCE)	Taskname
Interlockings	Name
Menus	Name

4. Language switch detail view toolbar and context menu



Menu item	Action
New language file	Inserts a new empty language file in the table.
Create standard function	Creates a function Language switch and opens the dialog (on page 27) for configuration.
Save	Saves language file.
Copy file	Copies selected file to the clipboard.
Copy key	Copies selected key to the clipboard.
Paste	Pasts content of the clipboard (file or key) to the language file. The pasted file is visible after you refreshed the Editor view.
Delete file	Deletes selected language files from the language table.
Delete key	Deletes selected key from the language table.
Jump back to starting element	If you entered the list via function linked elements , the symbol leads back to the start element. Only available in the context menu when all linked elements are opened.
Export file	Exports selected language file in format TXT.
Import file	Imports file in TXT format.
Extended import/export	Opens the menu for importing and exporting of -Step 7 projects, dBase and CSV. Note: For additional information please read the chapter Step 7-project import in the book import - export.
Find	Opens dialog (on page 15) for searching after entries in the active language file.
Replace	Opens dialog (on page 16) in order to find and replace entries in the active language file.
Font for selected language file	Opens drop-down list to select the font (on page 23): <ul style="list-style-type: none"> ▶ Selection: The dialog for selecting a font is opened ▶ Default font: Default font is used
Language file for editor	Opens drop-down list to select language file for the Editor (on page 11).
Remove all filters	Removes all filter texts from the columns.

Character table	Opens the Windows character table.
Update local version	Only available at distributed engineering. Synchronizes the local copy of the language file with the server database and updates it.
Enable changes	Only available at distributed engineering. Locks language files against change by the user.
Accept changes	Only available at distributed engineering. Transfers local changes to the server database and unlocks the language file for other users.
Undo changes	Only available at distributed engineering. Discards all local changes and unlocks the language file for other users.
Help	Opens online help.



Information

The processes export file, copy, search and replace are all referring to the active language file. Active means:

At clicking the language table the file in whose column you click is set to active. The file name of the active file is displayed in the property window and the column of the file receives a binoculars symbol in the column header.

5. Keywords

DEFINE KEY WORDS

Keywords are marked by character @.

For this, the following applies:

@Text	The whole text will be translated.
Text	This text will not be translated.
@Text	<p>The text between the two “@” will be translated.</p> <p>The following applies here: After an odd number of “@” the text will be translated (start counting at the beginning of the entry).</p> <p>For example:@user@Doe</p> <ul style="list-style-type: none"> ▶ User is translated ▶ Doe is not translated <p>The text between the first and the second @ is translated, the text between the second and the third @ is not translated!</p>

LINKING

It is possible to link text elements which are to be translated with those which are not to be translated.

@The user@ Doe @is logged out.

@Text1@ Text2 @Text3

- ▶ Text 1: will be translated
- ▶ Text 2: will not be translated
- ▶ Text 3: will be translated

DISPLAYING KEY WORDS IN THE RUNTIME

If a keyword is linked to a translation, the translated text is displayed in the Runtime.

If a keyword is not linked to a translation, no text is displayed in the Runtime.

Texts which are not yet translated can be displayed as keyword. To do this:

1. navigate to **Graphical design** -> in the project settings **Runtime general**
2. Activate the property **Display not translated keywords**
3. not translated texts are then displayed as @key word in the Runtime

6. Language table

To engineer a language switch you must create a **language table** in the project manager. This language table is based on a text file.

For this, the following applies:

- ▶ The table always contains column **key word**.
- ▶ The column **ZENONSTR.TXT** is created automatically. This file cannot be deleted but expanded. When the Runtime starts this file is loaded automatically.
- ▶ Each language receives an own column in the language table.
- ▶ For each column an own language file (on page 12) is created. In the column the key word is saved together with its translation. Key word and translation are separated by the pipe character |.
- ▶ If a key word is entered in the language table, automatically all columns of this line are filled with the key word. This key word is then replaced by the translation of the respective language.
- ▶ If no translation is available, the key word is displayed in the Runtime.

6.1 Create new language file

To create a new language file:

1. open the context menu of the entry **Language file** in the **project manager**
2. select entry **New**.
3. the dialog for opening a new language file is opened



4. give a freely definable name
Note: Special characters are not allowed; the file extension *.txt is set automatically
5. confirm by clicking on the **OK** button
6. the new file is added to the language table on the far right side

At creating a new language file, language-dependent subfolders with the name of the new file are created in folder for external binary files:

- ▶ Graphics
- ▶ Help
- ▶ Multimedia
- ▶ Texts and formats

- ▶ Report Viewer

6.2 Display and handling

MULTI-LINE DISPLAY

Key texts and translation can be displayed in multi-line.

To define the line height individually:

1. move the mouse to the header on the left-hand side of column **key word**
2. go to the separator line of the lines until the mouse cursor changes to a cross
3. with the left mouse button pressed, drag the line to the desired height

To customize the line height individually

1. move the mouse to the header on the left-hand side of column **key word**
2. go to the separator line of the lines until the mouse cursor changes to a cross
3. double-click on the separator line
4. the line height is automatically adapted to the content; the line break for texts is carried out according to the column width

Note: The defined line heights are not saved when you leave the list.

FIND AND REPLACE

It is possible to search texts and text fragments in a language table. At this regular expressions can be used. At the same time the references can also be replaced. Find and replace is always valid for the column in which the cursor is located.

To find and replace:

1. activate the desired column
2. carry out a right click
3. in the context menu select either **search** (on page 15) or **replace** (on page 16).

INCREMENTAL SEARCH

1. By pressing any alphanumeric key in the list an incremental search is started:
2. The next line of the active column whose text matches the search criterion is selected.

3. The search always refers to the first character of the line. For example:
`r` finds the line starting with `red` but not the one starting with `green`

SORT

To sort the table:

1. click on the column header of the column which should be sorted
2. the column is sorted whereas the sorting order (ascending/descending) is displayed by an arrow above the column label
3. another click in the column header changes the sorting order

FILTER

The language table can be filtered. For this the filter text is entered in the header of the column which should be filtered. All lines which do not match the filter criterion are removed from the list. In the filter text you can use wildcards "*" (several characters) and "?" (single character). You can combine several filters.

To reset the filter, delete the filter text from the header or use command **Remove all filters** from the context menu.

COPY AND PASTE

Via the context menu you can copy the active file to the clipboard with the help of command **Copy file**. To paste a file from the clipboard, select command **Paste** from the context menu.

At pasting it is differentiated between your own project and a foreign project:

- ▶ At pasting to the same project a new file with name "Copy n of xxx.txt" is pasted:
 - n = Number of the copy
 - xxx = name of the copied file
- ▶ At pasting in another project, it is checked whether a language file with the same name already exists.
 - If a language file with the same name already exists, there is a query whether the file should be overwritten.
 - If the language file does not exist, it is insert with the name of the copied file in the project.

Note: Key texts can also be copied and pasted with shortcuts `Ctrl+C` and `Ctrl+V`. This is not possible for language files.

RENAME

The file name of the active file is displayed in the property window as property **File name**. Here you can change the name of the language file (column). At renaming a language file the corresponding language-dependent sub-folders in the binary files folders are also renamed (see chapter Create new language file (on page 12)).

USE LANGUAGE TABLE IN THE EDITOR

Keywords can be translated and used during engineering in the Editor. Thus you can - without having to start the Runtime - check for example whether the text field length are large enough for all languages.

To use a language file in the Editor:

1. in the context menu, select the **Language file for Editor** entry.
2. select the desired file in the sub-menu
3. the language file which is active in the Editor is highlighted in the column header with green font

FONTS

Fonts (on page 23) can also be changed via the context menu of the language table.

You can create global fonts in the global project. The entries existing there are available for all projects in the workspace.

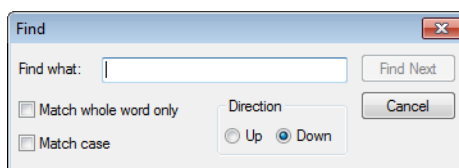


Information

If the font is not displayed correctly in the list view, you must activate font Arial Unicode in the Control Panel.

6.2.1 Search

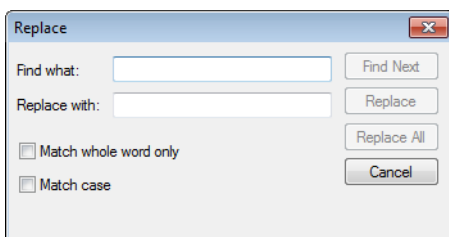
To search in the language table execute a right-click on the desired column and select command **Search** from the context menu.



Parameters	Description
Search for	Input of the search term.
Only whole words	<ul style="list-style-type: none"> ▶ Active: Only the search term defined in the input field is found. ▶ Inactive: Terms which contain the search term are also found. Example: "Text" also finds "Texture"
The case	<ul style="list-style-type: none"> ▶ Active: The search is case-sensitive. Example: "Text" only finds "Text" but not "text." ▶ Inactive: Case sensitivity has no influence on the search results.
Search direction	Defines search direction.
Up	Active: It is searched from the highlighted cell up.
Down	Active: It is searched from the highlighted cell down.
Continue search	Finds and highlights next reference.
Cancel	Closes search

6.2.2 Replace

To search and replace in the language table execute a right-click on the desired column and select command **ReplacE** from the context menu.



Parameters	Description
Search for	Input of the search term.
replace with	Input of the term which should replace the search term.
Only whole words	<ul style="list-style-type: none"> ▶ Active: Only the search term defined in the input field is found. ▶ Inactive: Terms which contain the search term are also found. Example: "Text" also finds "Texture"
The case	<ul style="list-style-type: none"> ▶ Active: The search is case-sensitive. Example: "Text" only finds "Text" but not "text." ▶ Inactive: Case sensitivity has no influence on the search results.
Find next	Finds and highlights next reference.
Replace	The found term is replaced.
Replacing all	All found search terms in the active column are replaced automatically.
Cancel	Closes search

6.3 Key words in the language table

Key words (on page 10) for language switchable text are marked by a @ in zenon. In the language table key words are entered without character @. Existing control characters @ are removed automatically.

For the entries in the language table the following is true:

- ▶ for each @ packages are created
- ▶ these must be inserted individually in the language table.

Example: The language switchable text "@The user@ Doe @is logged out." has two entries in the language table:

- Line 1: **The user**
- Line 2: **is logged out**
- ▶ after an import each language file initially receives the key words which it had prior to the import
- ▶ as soon as something is changed in the language table (e.g. entry of a new key word) all key words of all languages are synchronized
 - each language file then contains all key words
- ▶ all keywords entered in the table newly are always written in all available languages



Attention

The import can lead to new key words for which no translation exists in the already existing language file. In this case the key words are displayed in the Runtime.

ADD NEW KEYS

New keys are entered in the last (empty) line. At entering a new key text all translations of the line are filled with the new key text.

If you press `Ins`,

1. the last line is selected independent of the position of the cursor
2. the cell is opened in order to edit the key word

EDIT KEY AND TRANSLATIONS

The editing of cells in the list is done by clicking on a cell in the selected line. If you press `F2`, the cell on which the focus currently lies is edited.

DELETE KEY AND TRANSLATIONS

You can either delete single translations or whole keys including all translations.

To delete a key word with all translations:

1. select the line
2. press `Del` or select **Delete key** from the context menu
3. the key word is deleted together with all translations without a confirmation request.
4. you can select and delete several lines at once (`Ctrl`+ mouse click; `Shift`+mouse click)

To delete translations:

1. select the line
2. column key word must not be active
3. press and hold the shift key and press `Del`
4. the translation of the active column is deleted

COPY AND PASTE

To copy key words:

1. highlight the desired line (multi-select is possible)

2. press `Ctrl+C` or select **copy key** from the context menu
3. the key words are copied to the clipboard

To past key words:

1. click in the language table
2. press `Ctrl+V` or select **Paste** from the context menu
3. the key words and translations are pasted from the clipboard to the list
4. if a copied key already exists in the list, a new key **copy n of xxx** is created
 - n = Number of the copy
 - xxx = name of the copied key

7. Edit language files externally

Language files can also be edited externally. For this they must be exported. The export can be:

- ▶ TXT file: Edit with text editor (on page 22)
- ▶ CSV file: Edit with Microsoft Excel (on page 22)

To edit a language file:

1. export (on page 20) the desired file
2. carry out the changes depending of the export type with
 - text editor (on page 22) or
 - Microsoft Excel (on page 22)
3. import the file again in the Editor



Attention

Note for external change:

- ▶ At the import the new file is not simply overwritten but merged with the file available in the current project. For details see: Export and import language files (on page 20)
- ▶ Changes always only affect the key word and the selected language. All other languages remain unchanged or empty.

7.1 Export and import language files

EXPORT

To export a language file:

1. click in the desired column (for TXT export)
2. open the context menu with a right-click
3. select the desired export type:
 - Export file: exports the language table in the TXT format
Is especially suitable for forwarding to other users and the import in other projects. Always only concerns the selected language file.
 - Extended import/export -> Export CSV all: exports all existing tables in the CSV format
Is especially suitable for external editing. Always concerns all language files of a language table.
4. the dialog for selecting saving location and file name is opened
5. save the export file
6. a message informs you about the export and offers to open the export folder
 - Click on button **Yes** to open the export folder and to close the dialog
 - Click on button **No** to close the dialog

IMPORT

To import a language file:

1. click in the language table
2. open the context menu with a right-click
3. select the desired import type:
 - Import file: imports a file in TXT format
 - Extended import/export -> Import CSV: imports a file in CSV format
4. the dialog for selecting a file is opened
5. Click OK to import the file



Attention

The import can lead to new key words for which no translation exists in the already existing language file. In this case the key words are displayed in the Runtime.

IMPORT OF TXT

Text files must match the format of the language table for the import: **Key text** + | + **Translation**

At the import the new file is not simply overwritten but merged with the file available in the current project:

- ▶ Entries which exist in the import file and in the project are overwritten with the import entries.
- ▶ Entries which only exist in the project are not changed.
- ▶ Entries which only exist in the file which is imported are added.
- ▶ If a language file of the import file does not yet exist in the project, a new file with a new name is created.


IMPORT OF CSV

CSV files must match the format of the language table for the import:

- ▶ Valid column separators must be used:
 - Pipe (|)
 - Semi-colon (;)
 - TAB (->)

If other characters are used as column separators, an error message is displayed.

- ▶ The first line must contain a list of the files whereas a placeholder for column **key words** must be located at the first position.
- ▶ The file must have the extension **.csv**. If this is not the case, an error message is displayed.
- ▶ In the additional lines you can find the respective key text and the translations texts separated by the column separator. The key text must always be in the first column.
- ▶ If a language file which is stated in a column heading does not yet exist, a new file with the indicated name is created.
- ▶ Existing files are merged from a text file in the same way as at the import.

 **Example**

Structure CSV file:

Key word|ZENONSTR.TXT|FRENCH.TXT|ENGLISH.TXT|GERMAN.TXT

A1004|A1004|F1004|E1004|D1004

A14|A14|F14|E14|D14

A25|A25|F25|E25|D25

7.2 Editing in text file

EDIT IN A TEXT FILE

The following applies for language files:

- ▶ The content is entered as text in chronologic order.
- ▶ The separator between a key word and a translated term is the pipe symbol |.
- ▶ Only the term after the pipe symbol is translated.

 **Example**

```
|  
eins|one  
zwei|two  
drei|three
```

7.3 Editing in MS Excel

Editing with MS Excel is also possible. In order to edit a language file in MS Excel:

1. export (on page 20) the language table to a CSV file with file extension **.csv**
2. open the file with MS Excel (double click the file)
3. the export file is automatically imported to Excel

4. the data are displayed as follows:
 - Column A: Keyword
 - additional columns: Translation; a translation per column
 - a separator is not displayed
5. edit the texts as you like
6. save the file as CSV file.

To use the changed language file in zenon, import (on page 20) the CSV file to zenon.

8. Fonts

During the language switch it can be necessary to use different fonts; e.g. a Unicode font for East Asian characters.

DEFINITION VIA FONT LISTS

Define fonts and font lists in node `screens/Fonts`. The font lists created here can be selected via function **Language switch**.

Note: You can find details about fonts and lists in chapters Fonts in manual Screens.

LANGUAGE FILE ASSIGN FONT TYPE DIRECTLY

Font types can be assigned to language files directly. However this only defines the optical display in the language file. The display of the translated texts in the Editor and in the Runtime is not affected. The display is defined via Font lists.

To assign a font type to a language file:

1. select a column of the language file
2. select **Font for selected language file/Selection** from the context menu
3. the Windows standard dialog for selecting fonts is opened
4. select the font you wish to assign

Note: additional settings of the standard dialog such as font color do not affect the display in zenon



Information

Font type and language file can be already used and displayed in the Editor. Select the following from the context menu:

- ▶ of the language file: Language file for Editor -> select desired file
- ▶ of the font list: Font list for selected language file -> select desired list



Attention

At vector element Static text fonts can also be embedded. They can then not be changed via the language file.

9. Pre-defined keywords - system text in CEL

There are pre-defined keywords for all texts, that are used in the Runtime as defaults.

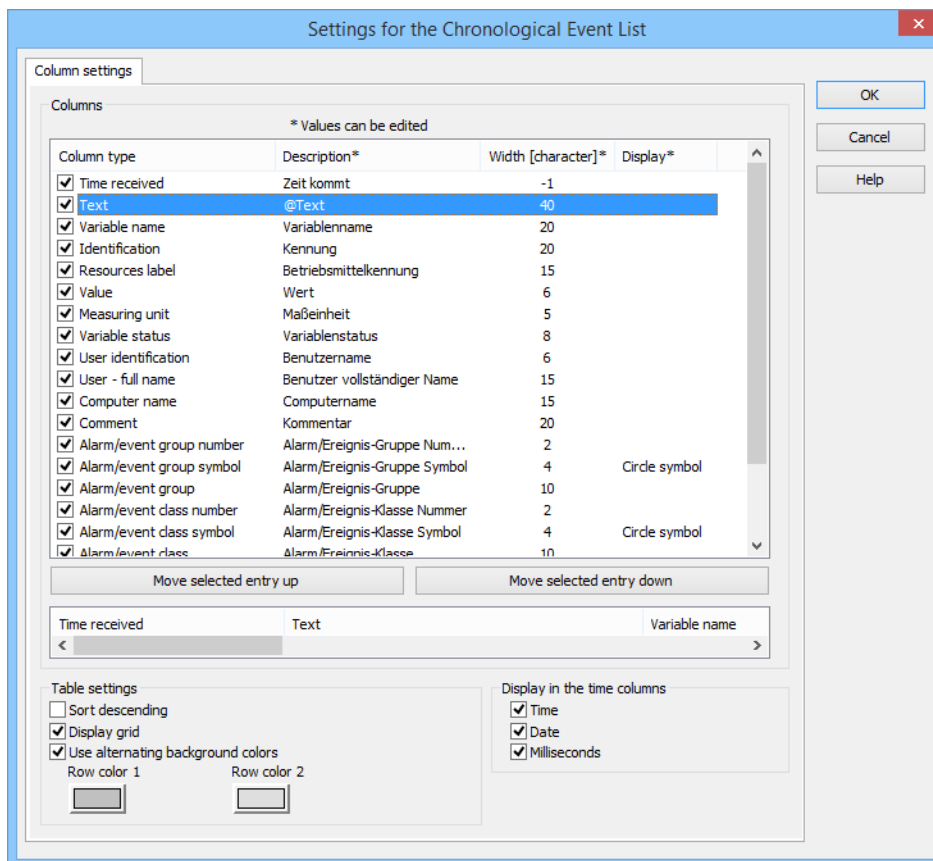
You will find pre-defined keywords in the file `CEL_Keys.txt` in folder `[zenon Installation]\Wizards_NotSupported\Additional`

Recommendation: For the engineering use the language table wizard.

Attention: Probable changes are overwritten during a zenon update. So we recommend saving the changed file and copying it to the new version after the update.

The Runtime language has to be set to English, so that the language switching works for the dialogs or with the pre-defined keywords for the CEL, because the keywords are defined in English.

Texts which are used in the column headlines of the Chronological Event List and the Alarm management can be configured in the project settings. The dialog is called up via: **Chronological Event List -> Column settings CEL** or **Alarm Message List -> Column settings AML** or in the corresponding function **Screen switch**.



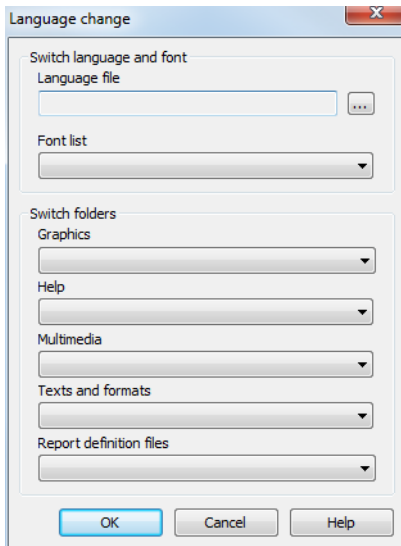
The procedure is the same as with texts. A @ at the beginning of the description makes language switching possible.

10. Paths for language switch of the Runtime help

For the files necessary for the language switch, the necessary entries are automatically created in subfolder to the files when creating a language file:

- ▶ Graphics
- ▶ Help
- ▶ Multimedia
- ▶ Texts and formats
- ▶ Report Viewer

At the configuration of function Language switch (on page 27) the respective folder can be selected:



Attention

The files must have the same name in the different languages, but they are stored in different folders.

The default path is already given in the Editor. If the function Language change is executed, the path is changed. It is also possible to create individual folders in the project tree in node **File**.



Information

*It is possible to create several levels of subfolders in node **File**. In function language switch you can only select folders which are located in the first level.*

If the language switch is not activated, the default paths are the standard folders.



Attention

In general, language switching in Runtime is not possible with the HTML help on Microsoft operating systems. Help in which the language can be switched must be configured via a HTML screen.

Exception: Help under Windows CE.

11. Evacuating translations

To evacuate texts for translation:

export (on page 20) the language table to CSV

have the texts translated (on page 22)

import the changed CSV file

take care that at distributed engineering you must activate `Enable changes` for the language file in order to be able to edit it.



Attention

In multi-user projects key texts and their translation can only be changed if changes are enabled for the files. Translation text of files for which changes are not possible cannot be selected or edited.

Key texts can only be changed if changes are enabled for all files. At entering new keys, the keys are only entered in files for which changes are enabled.

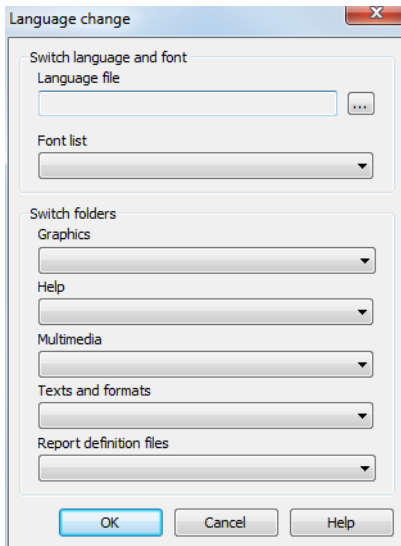
12. Function Language switch

With this function, text information, for example text information for buttons, can be switched to a different language in the Runtime. When creating a new language file, a language-specific subfolder is created in the respective files for graphics, help, multimedia, texts and format, and Report Viewer. This is given the same name as the new language file. The respective files are stored in this folder. The active subfolder can be switched with the **Language switch** function. If there is no file with the given name present in the folder, an attempt is made to load the file from the superordinate non-language-specific folder.

To configure the function:

1. Select **New function...**
2. navigate to node **Application**
3. select **Language switch**

4. Configure language switching in the dialog that opens



Parameters	Description
Language file	Opens the file manager for selecting a language file.
Font list	Drop-down list with a list of the fonts defined in the editor.
Folder switching	Contains paths for required files.
Graphics	Drop-down list with language-specific subfolders for graphics.
Help	Drop-down list with language-specific subfolders for CHM Runtime help files.
Multimedia	Drop-down list with language-specific subfolders for multimedia files.
Texts and formats	Drop-down list with language-dependant subfolders for texts and formats
Report definition files	Drop-down list with language-specific subfolders for Report Viewer
OK	Accepts configuration, creates function and closes dialog.
Cancel	Discards settings, closes dialog and creates functions with target.
Help	Opens online help.