## ACRO

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## Typeset Acronyms and other Abbreviations

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**ACRO** allows you to define and manage acronyms and abbreviations. It can also be used for glossaries or nomenclatures.

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## Part I.

## Get started with ACRO

#### 1. Licence

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

## 2. Glossary

**articles** Articles are prefixes to acronyms, usually separated with a blank. *Different types of articles are mutually exclusive.* 

**endings** Endings are postfixes to acronyms, usually not separated from the acronym. *Different* types of endings are mutually exclusive.

**load-time option** A load-time option is a package option of ACRO which *must* be set as option to  $\usebox{usepackage}[\langle options \rangle] \{acro\}.$ 

**option** An option is a package option of ACRO which must set with \acsetup. It *cannot* be set as option to \usepackage. Options usually also can be set in the optional argument of \ac and friends.

**property** A property is an option to the second argument of the \DeclareAcroym command. They are options of an individual acronym if you will.

**template** A template determines how different objects of ACRO are printed. This includes the acronyms themselves but also for example the list of acronyms as a whole.

translations Localisation strings which can be modified.

## 3. ACRO for the impatient

Acronyms are defined in the preamble via the command

 $\DeclareAcronym{\langle id \rangle}{\langle properties \rangle}$ 

where  $\langle id \rangle$  is a unique string to identify the acronym and  $\langle properties \rangle$  is a key/value list of acronym properties. These include:

 $short = \{\langle text \rangle\}$  (required)

The short form of the acronym. *This property is required*: an acronym must have a short form.

 $long = \{\langle text \rangle\}$  (required)

The long form of the acronym. *This property is required*: an acronym must have a description.

In its simplest form an acronym needs a short and a long form. Please note that both properties *must* be set.

In the document acronyms are used with these commands:

```
\ac{\langle id \rangle} \Ac{\langle id \rangle}
```

\ac prints the acronym  $\langle id \rangle$ , the first time with full description and every subsequent use only the abbreviated form. \Ac does the same but uppercases the first letter – this may be needed at the beginning of a sentence.

```
\acs{\langle id \rangle} \Acs{\langle id \rangle}
```

\acs prints the short form of the acronym  $\langle id \rangle$ . \Acs does the same but uppercases the first letter.

```
\acl{\langle id \rangle} \Acl{\langle id \rangle}
```

**\acl** prints the long form of the acronym  $\langle id \rangle$ . **\Acl** does the same but uppercases the first letter

```
\acf{\langle id \rangle} \Acf{\langle id \rangle}
```

\acf prints the full form of the acronym  $\langle id \rangle$ . \Acf does the same but uppercases the first letter.

Let's say you defined CD as follows:

```
    \DeclareAcronym{cd}{
        short = CD ,
        long = compact disc
        4 }
```

Then the usage is

```
1 \begin{tabular}{ll}
                                         first
                                                  compact disc (CD)
   first & \ac{cd} \\
                                         second
                                                  CD
   second & \ac{cd} \\
                                         long
                                                  compact disc
   long & \acl{cd} \\
   short & \acs{cd} \\
                                          short
                                                  CD
  full
          & \acf{cd}
                                         full
                                                  compact disc (CD)
7 \end{tabular}
```

## 4. Setting options

#### 4.1. Load-time options

ACRO knows only a small set of load-time options which can be used as argument to \usepackage:

```
upgrade = true|false
```

Initial: false

When this option is used ACRO tries to give as much helpful and meaningful warning or error messages when a deprecated or removed command, property, or option is used. This is especially useful if you are upgrading from version 2.

You can still use version 2 by specifying using one of the following options:

```
1 \usepackage{acro}[=v2]
2 \usepackage{acro}[=version2]
```

#### 4.2. Setup command

All options of ACRO that have *not* been mentioned in section 4.1 have to be set up either with this command

```
\acsetup{\langle options \rangle}
```

or as option to other commands. If the latter is possible then it is described when the corresponding commands are explained. Options usually follow a key/value syntax and are always described in the following way:

#### option

An option without a value. Those options are very rare if there are any.

```
option = \{\langle value \rangle\}
Initial: preset
```

An option where a value can be given. The pre-set value is given to the right.

```
option = choiceA|choiceB|choiceC
```

Initial: choiceB

An option with a determined set of choices. The underlined value is chosen if the option is given without value.

```
option = true|false
```

A boolean option with only the choices true and false.

#### module/option

An option at a deeper level belonging to the module module.

All of the above is probably clear from an example (using real options):

```
1 \acsetup{
2  make-links = true , % boolean
3  index , % boolean
4  format = \emph , % standard
5  list / local , % boolean option of the list module
6  list / display = all % choice option of the list module
7 }
```

## Part II.

# Comprehensive description of creation and usage of acronyms

## 5. Declaring acronyms and other abbreviations

All acronyms have to be declared in the preamble with the following command in order to be used in the document. Any usage of an acronym which has not been declared leads to an error message.

#### $\DeclareAcronym{\langle id \rangle}{\langle list\ of\ properties \rangle}$

The basic command for declaring an acronym where  $\langle id \rangle$  is a unique string identifying the acronym. Per default this is case sensitive which means id is different from ID, for example.

The command understands a number of properties which are listed in the following sections. This is a comprehensive overview over the existing properties. Many properties are also explained in more detail in later sections of this manual.

#### case-sensitive = true|false

Initial: true

When this is set you can write the ID of the acronym upper- or lower- or mixed case and it is recognized by ACRO as the same. This might be useful when the acronym appears in the page header, for example.

case-insensitive = true|false

Initial: false

The inverse of the option case-sensitive.

since v3.6 (2022/01/04)

In its simplest form an acronym needs a short and a long form. Please note that both properties *must* be set.

#### 5.1. Basic properties

 $\mathsf{short} = \{\langle \mathit{text} \rangle\} \tag{required}$ 

The short form of the acronym. *This property is required*: an acronym must have a short form.

Maybe you mostly have simple acronyms where the  ${\tt ID}$  and short form are the same. In that case you can use

#### use-id-as-short = true|false

Initial: false

to use the ID of the acronym as short form. For more complicated cases this would still allow you to set the short form.

 $long = \{\langle text \rangle\}$  (required)

The long form of the acronym. *This property is required*: an acronym must have a description.

 $alt = \{\langle text \rangle\}$ (initially empty) Alternative short form.  $extra = \{\langle text \rangle\}$ (initially empty) Extra information to be added in the list of acronyms. foreign =  $\{\langle long \ form \ in \ foreign \ language \rangle\}$ (initially empty) Can be useful when dealing with acronyms in foreign languages, see section 14 on page 23 for details.  $long-post = \{\langle text \rangle\}$ (initially empty)  $\langle text \rangle$  is appended to the long form of the acronym in the text but not in the list of acronyms. (initially empty)  $post = \{\langle text \rangle\}$  $\langle text \rangle$  is appended to the acronym in the text but not in the list of acronyms.  $single = \{\langle text \rangle\}$ if unused then equal to long If provided  $\langle text \rangle$  will be used instead of the long form if the acronym is only used a single time and the option single has been set, see section 9 on page 14. if unused then equal to short  $sort = \{\langle text \rangle\}$ If used the acronym will be sorted according to this property instead of its short form.  $tag = \{\langle csv \ list \rangle\}$ (initially empty) The tag(s) of an acronym.  $cite = [\langle prenote \rangle] [\langle postnote \rangle] \{\langle citation \ keys \rangle\}$ (initially empty) A citation that is printed to the acronym according to an option explained later. before-citation =  $\{\langle text \rangle\}$ (initially empty)  $\langle text \rangle$  is prepended to the citation of the acronym when and where the citation is printed.  $index = \{\langle text \rangle\}$ (initially empty) This property allows to overwrite the automatic index entry with an arbitrary one. See section 16.2 on page 28 for details.  $index-sort = \{\langle text \rangle\}$ if unused then equal to sort

If you use the option index every occurrence of an acronym is recorded to the index and sorted by its short form or (if set) by the value of the sort property. This property allows to set an individual sorting option for the index. See section 16.2 on page 28 for details.

 $index-cmd = \{\langle index \ command \rangle\}$ 

(initially empty)

This sets the indexing command for the acronym. If unused then the command set by the corresponding option is used. See section 16.2 on page 28 for details.

#### 5.2. Properties related to plural and indefinite forms

 $short-plural = \{\langle text \rangle\}$ 

Initial: s

The plural ending appended to the short form.

 $short-plural-form = \{\langle text \rangle\}$ 

(initially empty)

The plural short form of the acronym; replaces the short form when used instead of appending the plural ending.

 $long-plural = \{\langle text \rangle\}$ 

Initial: s

The plural ending appended to the long form.

long-plural-form =  $\{\langle text \rangle\}$ 

(initially empty)

Plural long form of the acronym; replaces the long form when used instead of appending the plural ending.

 $alt-plural = \{\langle text \rangle\}$ 

Initial: s

The plural ending appended to the alternative form.

alt-plural-form =  $\{\langle text \rangle\}$ 

(initially empty)

The plural alternative form of the acronym; replaces the alternative form when used instead of appending the plural ending.

foreign-plural =  $\{\langle text \rangle\}$ 

Initial: s

The plural ending appended to the foreign form.

foreign-plural-form =  $\{\langle text \rangle\}$ 

(initially empty)

Plural foreign form of the acronym; replaces the foreign form when used instead of appending the plural ending.

short-indefinite =  $\{\langle text \rangle\}$ 

Initial: a

Indefinite article for the short form.

long-indefinite =  $\{\langle text \rangle\}$ 

Initial: a

Indefinite article for the long form.

alt-indefinite =  $\{\langle text \rangle\}$ 

Initial: a

Indefinite article for the alternative form.

#### 5.3. Properties related to formatting

format =  $\{\langle code \rangle\}$ 

(initially empty)

The format used for both short and long form of the acronym.

 $short-format = \{\langle code \rangle\}$ 

if unused then equal to format

The format used for the short form of the acronym.

long-format =  $\{\langle code \rangle\}$ 

if unused then equal to format

The format used for the long form of the acronym.

first-long-format =  $\{\langle code \rangle\}$ 

if unused then equal to long-format

The format used for the first appearance of the long form of the acronym.

alt-format =  $\{\langle code \rangle\}$ 

if unused then equal to short-format

The format used for the alternative form of the acronym. If this is not given the short format will be used.

extra-format =  $\{\langle code \rangle\}$ 

(initially empty)

The format used for the additional information of the acronym.

foreign-format =  $\{\langle code \rangle\}$ 

(initially empty)

The format used for the foreign form of the acronym.

list-format =  $\{\langle code \rangle\}$ 

since v3.4 (2020/12/25)

if unused then equal to long-format

The format used for the long form of the acronym in the list if the list template supports it. All pre-defined list templates *do* support it.

first-style = long-short|short-long|short|long|footnote

(initially empty)

The style of the first appearance of the acronym, see also section 8 on page 13.

subsequent-style = long-short|short-long|short|long|footnote

(initially empty)

The style of the appearance of the acronym after the first time.

single-style = long-short|short-long|short|long|footnote

(initially empty)

The style of a single appearance of the acronym, see also section 9 on page 14.

#### 5.4. Properties related to the created PDF file

 $pdfstring = \{\langle pdfstring \rangle\}$ 

if unused then equal to short

Used as PDF string replacement in bookmarks when used together with the hyperref [ORT21] or the bookmark package [Obe20].

 $pdfcomment = \{\langle text \rangle\}$ 

Sets a tooltip description for an acronym. For actually getting tooltips you also need an appropriate setting of the options pdfcomment/cmd and pdfcomment/use, see also section 20.3 on page 33.

 $short-acc = \{\langle text \rangle\}$ 

if unused then equal to short

Sets the ActualText property as presented by the accsupp package for the short form of the acronym.

 $long-acc = \{\langle text \rangle\}$ 

if unused then equal to long

Sets the ActualText property as presented by the accsupp package for the long form of the acronym.

 $alt-acc = \{\langle text \rangle\}$ 

if unused then equal to alt

Sets the ActualText property as presented by the accsupp package for the alternative short form of the acronym.

foreign-acc =  $\{\langle text \rangle\}$ 

if unused then equal to foreign

Sets the ActualText property as presented by the accsupp package for the foreign form of the acronym.

 $extra-acc = \{\langle text \rangle\}$ 

if unused then equal to extra

Sets the ActualText property as presented by the accsupp package for the extra information of the acronym.

 $single-acc = \{\langle text \rangle\}$ 

if unused then equal to long-acc

Sets the ActualText property as presented by the accsupp package for a single appearance of the acronym.

 $list-acc = \{\langle text \rangle\}$ 

if unused then equal to list

Sets the ActualText property as presented by the accsupp package for the appearance in the list of acronyms.

#### 5.5. Futher properties

 $list = \{\langle text \rangle\}$ 

if unused then equal to long

If specified this will be written in the list as description instead of the long form if the corresponding list template supports it.

foreign-babel =  $\{\langle language \rangle\}$ 

(initially empty)

The babel [Bra22] or polyglossia [Cha21] language of the foreign form. This language is used to wrap the entry with  $foreignlanguage{\langle language \rangle}$  if either babel or polyglossia is loaded. You'll need to take care that the corresponding language is loaded by babel or polyglossia.

foreign-locale =  $\{\langle language \rangle\}$ 

(initially empty)

The language name that is output when the option locale/display is used. If this property is not set then the appropriate value might be derived from foreign-babel. See section 14 on page 23 for details.

 $preset = \{\langle set \ name \rangle\}$ 

(initially empty)

Enables to load a set of properties that has been defined earlier with \NewAcroPreset, see section 5.6.

 $uselist = \{\langle csv \ list \ of \ acronym \ ids \rangle\}$ 

(initially empty)

If this property is given and all acronyms specified in this property have been used before the first time the current acronym is used it behaves as if it has been used before.

#### 5.6. Presets

since v<sub>3.5</sub>

since v3.5 (2021/01/16)

since v3.5

Sometimes it can be useful to have different kinds of acronyms or abbreviations or similar which share a common set of properties. Such sets can be defined with these commands:

```
\NewAcroPreset{\langle set name \rangle}{\langle csv list of properties \rangle}
```

Defines the property set  $\langle set \ name \rangle$ . Any valid property can be set in  $\langle csv \ list \ of \ properties \rangle$ .

```
\RenewAcroPreset{\langle set name \rangle} {\langle csv list of properties \rangle}
Redefines the property set \langle set name \rangle.
```

```
\DeclareAcroPreset{\langle set \ name \rangle}{\langle csv \ list \ of \ properties \rangle}
Defines or redefines the property set \langle set \ name \rangle without checking.
```

#### 6. Using acronyms

There are a number of commands to use acronyms with. Their names always follow the same pattern which should make their usage intuitive immediately.

All of these commands have a starred form which means "don't count this as usage". All of these commands also have an optional argument that allows to set options for that usage only.

```
\acrocommand*[\langle options \rangle] \{\langle id \rangle\}
```

This is the general syntax of *all* of the commands listed below. The star and the optional argument is left way for the sake of readability. *A command \acrocommand does not actually exist.* 

```
\ac{\langle id \rangle} \ac{\langle id \rangle}
```

- $\acs{\langle id \rangle} \acsp{\langle id \rangle} \acsp{\langle id \rangle} \acsp{\langle id \rangle} \acsp{\langle id \rangle} \acsp{ints the short form of the acronym <math>\langle id \rangle$ . \acspace does the same but uppercases the first letter. The commands \acsp and \acsp, resp., print the corresponding plural forms. The commands \iacsp and \Iacs, resp., print indefinite forms.
- $\cline{id}\$   $\cline{id}\$

```
\acf{\langle id \rangle} \acfp{\langle id \rangle} \acfp rints the full form of the acronym \langle id \rangle. \acfp does the same but uppercases the first letter. The commands \acfp and \acfp, resp., print the corresponding plural forms. The commands \acfp and \acfp, resp., print indefinite forms.
```

The usage should be clear. Let's assume you have defined an acronym UFO like this:

```
1 \DeclareAcronym{ufo}{
2    short = UFO ,
3    long = unidentified flying object ,
4    foreign = unbekanntes Flugobjekt ,
5    foreign-plural-form = unbekannte Flugobjekte ,
6    foreign-babel = ngerman ,
7    long-indefinite = an
8 }
```

The typical outputs look like this:

```
| \ac{ufo} \\
| \ac{ufo} \\
| \iac{ufo} \\
| \iac{ufo} \\
| \iac{ufo} \\
| \lac{ufo} \\
| \frac{ufo} \\
| \fra
```

In a number of contexts all acronym commands act as if their starred form is used: in the table of contents, in the list of figures, and in the list of tables. The same is true for floats and the measuring phase of common table environments like tabularx or ltxtable.

#### 7. Alternative short forms

Sometimes expressions have two different short forms. And example might be JPEG which also often is JPG. This is what the property alt is there for.

```
alt = \{\langle text \rangle\}
```

Alternative short form.

Let's define JPEG:

```
    \DeclareAcronym{jpg}{
        short = JPEG ,
        sort = jpeg ,
        alt = JPG ,
```

```
5 long = Joint Photographic Experts Group
6 }
```

And let's see how to use it:

As you can see the full form shows both short forms of the acronym. This could be changed by altering the template for the full form, see section 24 on page 38 and section 8. The alternative form is also printed in the list of acronyms, see section A on page 57. This can also be changed by altering the template for the list, again see section 24.

## 8. The first or full appearance

If an acronym is used for the first time with \ac (after any number of usages with the starred forms of the usage commands listed in section 6 on page 11) or if an acronym is used \acf, then the first or full appearance of the acronym is printed.<sup>1</sup>

The first or full appearance of an acronym is determined by this option:

```
first-style = long-short|short-long|short|long|footnote Initial: long-short The style of the first appearance of the acronym. This options sets the appearance for all acronyms. Available options in reality are the names of all defined templates of the type acronym. All pre-defined templates can be found in section 24.1 on page 38.
```

```
Subsequent-style = long-short|short-long|short|long|footnote Initial: short The style of the appearance of the acronym after the first time. This options sets the appearance for all acronyms. Available options in reality are the names of all defined templates of the type acronym. All pre-defined templates can be found in section 24.1 on page 38.
```

It might be desirable to set the first appearance of an acronym individually. This is possible by setting the corresponding property:

```
first-style = long-short|short-long|short|long|footnote (initially empty)

The style of the first appearance of the acronym.
```

Let's again look at an example:

since v3.4

<sup>1.</sup> This usually requires at least two LATEX runs until it is stable.

```
compact disc (CD)

1 \acf[first-style=long-short]{cd} \\
2 \acf[first-style=short-long]{cd} \\
3 \acf[first-style=footnote]{cd} \\
4 \acf[first-style=long]{cd} \\
5 \acf[first-style=short]{cd}

a. compact disc

CD

a. compact disc
```

This also demonstrates the use of the optional argument.

An example of an abbreviation that should have long as first appearance might be "etc.", defined like this

```
1 \DeclareAcronym{etc}{
2    short = etc\acdot ,
3    long = et cetera ,
4    format = \textit ,
5    first-style = long ,
6    plural =
7 }
```

and output like this:

```
\ac{\etc}, \ac{\etc}\ \ac{\etc}. \et cetera, \etc. \etc.
```

The command \acdot is explained in section 18 on page 29. Basically it checks if a dot follows and outputs a dot if not.

## 9. Single appearances of an acronym

If an acronym is used only once (not counting usages with the starred forms of the usage commands listed in section 6 on page 11), then the single appearance of the acronym is printed.<sup>2</sup> The single appearance of an acronym is determined by this option:

```
single = \underline{true} | false | \langle number \rangle
```

Initial: false

This option determines whether a single appearance of an acronym counts as *usage*. It might be desirable in such cases that an acronym is simply printed as long form and not added to the list of acronym. This is what this option does. With  $\langle number \rangle$  the minimal number of usages can be given that needs to be exceeded. single = {1} is the same as single = {true}.

```
single-style = long-short|short-long|short|long|footnote Initial: long
The style of the single appearance of an acronym. Can be used to determine how a single appearance is printed if the option single has been set. This option sets the appearance for
```

<sup>2.</sup> This usually requires at least two LATEX runs until it is stable.

all acronyms. Available options in reality are the names of all defined templates of the type acronym. All pre-defined templates can be found in section 24.1 on page 38.

If you like you can also set the single appearance of an acronym individually:

```
single = \{\langle text \rangle\}  (initially empty)
```

If provided  $\langle text \rangle$  will be used instead of whatever template ("style") has been set for the single appearance if the acronym is only used a single time *and* the option single has been set.<sup>3</sup>

Let's again look at an example. The acronym PNG is defined as follows:

```
1 \DeclareAcronym{png}{
2    short = PNG ,
3    long = Portable Network Graphics ,
4    first-style = short-long ,
5    single-style = short
6 }
```

And it is used only once in this manual 4:

```
1 \ac{png} PNG
```

Please be aware that \acf would still print the full form, of course.

## 10. Printing the list

#### 10.1. The main command and its options

The main idea is simple: just place

```
\printacronyms[\langle options \rangle]
```

where you want the list to appear. It may require several (most times two) LATEX runs for it to stabilize so look out for any warnings from ACRO requiring to re-run.

The options controlling the list are these:

list/template = description|tabular|longtable|supertabular|tabularray|hitfaltodescription Choose the template to create the list with. See more on this in sections 24 on page 38 and A on page 53.

<sup>3.</sup> Actually the template *single* is used which typesets the single property.

<sup>4.</sup> You will find it in the list of acronyms in section A nonetheless as this document does list/display = {all}.

list/sort = true|false

Initial: true

Decide whether to sort the list of acronyms alphabetically or to print it in order of definition.

list/display = all|used

Initial: used

Decide whether to print only the acronyms actually used in the document or all acronyms which have been declared in the preamble.

 $list/exclude = \{\langle csv \ list \ of \ tags \rangle\}$ 

(initially empty)

Set a list of tags to exclude from the list. Only acronyms not belonging to one of these tags will be included.

 $list/include = \{\langle csv \ list \ of \ tags \rangle\}$ 

(initially empty)

Set a list of tags to include in the list. Only acronyms belonging to one of these tags will be included.

list/add = true|false

(initially empty)

since v<sub>3.4</sub> Set a list of tags to include in the list. These acronyms will be included in any case.

list/heading = none|section|section\*|chapter|chapter\*

Choose the heading template for the list of acronyms.

This only has an effect if the list template supports it. All pre-defined templates *do* support it.

 $list/name = \{\langle text \rangle\}$ 

Initial: \acrotranslate{list-name}

Overwrites the text which is used in the heading.

This only has an effect if the list template supports heading templates *and* the heading templates support it. All pre-defined heading templates *do* support this.

 $list/preamble = \{\langle text \rangle\}$ 

(initially empty)

Set a preamble to be placed between heading and actual list.

This only has an effect if the list template supports it. All pre-defined templates *do* support it.

list/locale/display = true|false

Initial: false

This options determines whether the language of the foreign form is printed or not.

This only has an effect if the list template supports for eign forms. All pre-defined templates  $\it do$  support them.

All these options can be set with \acsetup globally or locally as options to \printacronyms. In the latter case omit the leading list:

```
1 \acsetup{list/display=all, list/exclude=units}
```

2 O r

3 \printacronyms[display=all,exclude=units]

#### 10.2. Add page numbers to the list

If you want to include the page numbers where the acronyms have been used in the list of acronym you can use these options:

pages/display = first|all|none

Initial: none

Decide whether to include page numbers in the list of acroynms and whether to add the first page or every page. When you choose first and have hyperref loaded you will also get a backlink to that page.

pages/seq/use = true|false

Initial: true

Turns a two-page range into  $\langle num \rangle$  f. (sequens) and a three-page range into  $\langle num \rangle$  ff. (sequentes) when set to true

pages/seq/pre =  $\{\langle code \rangle\}$ 

Initial: \.

 $\langle code \rangle$  is inserted between the page number and the sequens or sequentes symbol.

pages/seq/threshold =  $\{\langle num \rangle\}$ 

Initial: 3

The threshold for a page range to be turned into *sequentes*. A page range above the threshold is still typeset as a range:  $\langle num_1 \rangle - \langle num_2 \rangle$ .

 $pages/fill = \{\langle code \rangle\}$ 

Initial: \acrodotfill

This is the code that is placed between acronym description and actual page numbers.

pages/name = true|false

Initial: false

If set to true the page numbers are preceded with p. or pp.

\acrodotfill

since v<sub>3.5</sub>

Creates a dotted line like those in the table of contents. If the macro \cftdotfill is defined it is equal to \cftdotfill{\cftdotsep}.

since v3.3 (2020/11/21)

Additionally to setting these options with \acsetup they can be set as options to \printacronyms:

printacronyms[pages={display=all,seq/use=false}]

#### 10.3. Filter lists using tags

With the property tag you can assign one or more tags to an acronym. These tags can be used to filter the list of acronyms.

 $tag = \{\langle csv \ list \rangle\}$ 

(initially empty)

The tag(s) of an acronym.

 $list/exclude = \{\langle csv \ list \ of \ tags \rangle\}$ 

(initially empty)

Set a list of tags to exclude from the list. Only acronyms not belonging to one of these tags will be included.

```
list/include = \{\langle csv \ list \ of \ tags \rangle\}
```

(initially empty)

Set a list of tags to include in the list. Only acronyms belonging to one of these tags will be included.

Let's look at an example. This manual declares these two acronyms with the tag city:

```
1 \DeclareAcronym{la}{
2    short = LA ,
3    long = Los Angeles,
4    plural = ,
5    tag = city
6 }
7 \DeclareAcronym{ny}{
8    short = NY ,
9    long = New York ,
10    plural = ,
11    tag = city
12 }
```

We can now use this to either print a list without these acronyms by saying

```
1 \printacronyms[exclude=city]
```

or print a list with only these acronyms with

If you use both exclude and include and list a tag in both exclude takes precedence over include.

```
1 \printacronyms[exclude={a,b},include={b,c}]
```

would only print acronyms with tag c.

#### 10.4. Local lists

Maybe you like a list of acronyms for each chapter in a book which only lists the acronyms used within this chapter. You need to do three things: set

barriers/use = true|false

Initial: false

this option to true, place

\acbarrier

before a new chapter starts (this is not necessary for the first chapter), and use \printacronyms with the option

list/local = true|false

Initial: false

(initially empty)

(initially empty)

or set this option once in the preamble with \acsetup so it is applied to every list.

Please read more on barriers in section 17 on page 29.

Please don't use page numbers together with local lists for the time being. If an acronym appears in more than one list both lists would contain the *same* page numbers anstead of only the ones local to barriers.

For the similar reasons please also don't use make-links together with local lists. This *might* be resolved on day.

## 11. Formatting

**ACRO** has a number of options and parameters which can be used to influence the formatting of acronyms.

 $format = \{\langle code \rangle\}$  (initially empty)

Sets the format for both the short and the long form.

 $format/short = \{\langle code \rangle\}$ 

Sets the format for the short form.

format/long =  $\{\langle code \rangle\}$ Sets the format for the long form.

 $format/first-long = \{\langle code \rangle\}$  (initially empty)

Sets the format for the first appearance of the long form.

 $format/alt = \{\langle code \rangle\}$  (initially empty)

Sets the format for the alternative form.

 $format/extra = {\langle code \rangle}$  (initially empty)

Sets the format for the extra information.

 $format/foreign = \{\langle code \rangle\}$  (initially empty)

Sets the format for the foreign form.

 $format/list = \{\langle code \rangle\}$  (initially empty)

Sets the format for the long form in the list form.

While this options influence the formatting of the acronyms globally you can also give each acronym its own formatting individually:

 $format = \{\langle code \rangle\}$  (initially empty)

The format used for both short and long form of the acronym.

 $short-format = \{\langle code \rangle\}$  if unused then equal to format

The format used for the short form of the acronym.

long-format =  $\{\langle code \rangle\}$  if unused then equal to format

The format used for the long form of the acronym.

first-long-format =  $\{\langle code \rangle\}$  if unused then equal to long-format The format used for the first appearance of the long form of the acronym.

 ${\tt alt-format} = \{\langle code \rangle\} \\ \\ {\tt if unused then equal to short-format} \\$ 

The format used for the alternative form of the acronym. If this is not given the short format will be used.

 $extra-format = \{\langle code \rangle\}$  (initially empty)

The format used for the additional information of the acronym.

foreign-format =  $\{\langle code \rangle\}$  (initially empty)

The format used for the foreign form of the acronym.

single-format =  $\{\langle code \rangle\}$  if unused then equal to long-format

The format used for the acronym if the acronym is only used a single time.

list-format =  $\{\langle code \rangle\}$  if unused then equal to long-format

The format used for the long form of the acronym in the list if the list template supports it. All pre-defined list templates *do* support it.

first-style = long-short|short-long|short|long|footnote (initially empty)

The style of the first appearance of the acronym, see also section 8 on page 13.

 $\label{eq:single-style} \verb|single-style| = long-short| short-long| short| long| footnote & (initially empty) \\$ 

The style of a single appearance of the acronym, see also section 9 on page 14.

Changed in Per default the individual formatting instructions *replace* the global ones. This can be changed through the option

format/replace = true|false Initial: true

With this option active local options will *replace* the global ones.

Let's see an example:

```
1 \DeclareAcronym{pdf}{
2    short = pdf ,
3    long = Portable Document Format ,
4    short-format = \scshape
5 }
```

```
1 \acsetup{format = \itshape}
2 \acf{pdf} \par
3 \acsetup{format/replace=false}
4 \acf{pdf}

Portable Document Format (PDF)
Portable Document Format (PDF)
```

## 12. Plural forms and other endings

#### 12.1. The plural ending and the plural form

Not in all languages plural forms are as easy as always appending an "s". Not even English. Sometimes there's other endings instead.<sup>5</sup> This is why ACRO has quite a number of different properties related to plural forms or endings:

```
short-plural = \{\langle text \rangle\}
Initial: s
```

The plural ending appended to the short form.

```
short-plural-form = \{\langle text \rangle\}  (initially empty)
```

The plural short form of the acronym; replaces the short form when used instead of appending the plural ending.

```
long-plural = \{\langle text \rangle\}
Initial: s
```

The plural ending appended to the long form.

```
long-plural-form = \{\langle text \rangle\}  (initially empty)
```

Plural long form of the acronym; replaces the long form when used instead of appending the plural ending.

```
alt-plural = \{\langle text \rangle\}
Initial: s
```

The plural ending appended to the alternative form.

```
alt-plural-form = \{\langle text \rangle\} (initially empty)
```

The plural alternative form of the acronym; replaces the alternative form when used instead of appending the plural ending.

<sup>5.</sup> German is full of such examples.

```
foreign-plural = \{\langle text \rangle\}
```

Initial: s

The plural ending appended to the foreign form.

```
foreign-plural-form = \{\langle text \rangle\}
```

(initially empty)

Plural foreign form of the acronym; replaces the foreign form when used instead of appending the plural ending.

There are two options which allow to change the default values for the whole document:

```
short-plural-ending = \{\langle text \rangle\}
```

Initial: s

Defines the plural ending for the short forms to be  $\langle text \rangle$ .

```
long-plural-ending = \{\langle text \rangle\}
```

Initial: s

Defines the plural ending for the long forms to be  $\langle text \rangle$ .

Now let's see two simple examples demonstrating the two different kinds of plural settings:

```
1 \DeclareAcronym{sw}{
2    short = SW ,
3    long = Sammelwerk ,
4    long-plural = e
5 }
6 \DeclareAcronym{MP}{
7    short = MP ,
8    long = Member of Parliament ,
9    plural-form = Members of Parliament
10 }
```

The first one has another plural ending than the usual "s". The second one has a different plural form altogether because appending an "s" would give a wrong form:

```
\acfp{sw} \par Sammelwerke (SWs)
\acfp{MP} Members of Parliament (MPs)
```

#### 12.2. Other endings

Besides plural endings there are other ones like the genitive case, for example. This is why ACRO generalized the concept. Section 25 on page 46 explains in detail how to define and use additional endings.

## 13. Articles

#### 13.1. Indefinite forms

Indefinite forms can be a problem if the short and the long form of acronyms have different indefinite articles.<sup>6</sup>

```
a unidentified flying object (unbekanntes
a \ac{ufo} \par
flugobjekt, UFO)
an \ac{ufo}
an \UFO
```

And what good would it be to use a package like ACRO if you have to keep track of first and second uses, anyway? This is why UFO should be defined like we did on page 11. We then can just use the dedicated commands and let them decide for us:

```
an unidentified flying object (unbekanntes
lac{ufo} \par
lac{ufo} \par
lac{ufo} a UFO
```

The commands which also output the indefinite article all start with an "i" and have all been described in section 6 on page 11 already: \iac, \iacs, \iacs, \iacs, \iacl, \iacl, \iaca, \iacf, and \Iacf.

#### 13.2. Other articles

There might be cases – most likely depending on your language – when you would like to have other articles behaving similar to the indefinite ones. Section 26 explains in detail how to define and use additional articles.

## 14. Foreign language acronyms

Sometimes and in some fields more often than in others abbreviations are used that are derived from another language. ACRO provides a number of properties for such cases:

```
foreign = \{\langle long \ form \ in \ foreign \ language \rangle\} (initially empty) Can be useful when dealing with acronyms in foreign languages, see section 14 for details.
```

```
foreign-plural = \{\langle text \rangle\} Initial: s
```

The plural ending appended to the foreign form.

```
foreign-plural-form = \{\langle text \rangle\} (initially empty)
```

Plural foreign form of the acronym; replaces the foreign form when used instead of appending the plural ending.

<sup>6.</sup> This may very well be a language specific issue.

```
foreign-format = \{\langle code \rangle\}
```

(initially empty)

The format used for the foreign form of the acronym.

```
foreign-babel = \{\langle language \rangle\}
```

(initially empty)

The babel or polyglossia language of the foreign form. This language is used to wrap the entry with  $\{case | case | case$ 

```
foreign-locale = \{\langle language \rangle\}
```

(initially empty)

The language name that is output when the option locale/display is used. If this property is not set then the appropriate value might be derived from foreign-babel.

There are also some options:

```
foreign/display = true|false
```

Initial: true

Determine whether to hide or display the foreign form.

```
list/foreign/display = true|false
```

Initial: true

since  $v_{3.2}$  Determine whether to hide or display the foreign form in the list of acronyms. (2020/05/10)

```
locale/display = true|false
```

Initial: false

This options determines whether the language of the foreign form is printed or not when the full form of the acronym is printed.

```
list/locale/display = true|false
```

Initial: false

The same but for the list of acronyms.

```
locale/format = {\langle code \rangle}
```

Initial: \em\text\_titlecase\_first:n

Determines how said language is formatted when printed. The last command in  $\langle code \rangle$  may take a mandatory argument.

Let's say you are writing a German document and are using the abbreviation ECU for Steuergerät which stems from the English "Electronic Control Unit". Then you can define it as follows:

```
1 \DeclareAcronym{ecu}{
2    short = ECU ,
3    long = Steuergerät ,
4    foreign = Electronic Control Unit ,
5    foreign-babel = english ,
6    foreign-locale = englisch
7 }
```

Now the abbreviation is introduced so that everyone understands the confusion:

```
1 \ac{ecu} \par
2 \acsetup{locale/display,locale/format=\emph}
3 \acf{ecu}

Steuergerät (Electronic Control Unit, ECU)
Steuergerät (englisch: Electronic Control Unit, ECU)
```

The property foreign-babel is used for ensuring correct hyphenation as long as you use babel or polyglossia and load the corresponding language, too. If you are writing your document in English then ACRO is able to deduce the language used for the "locale" field by itself:

```
1 \DeclareAcronym{eg}{
2    short = e.g\acdot ,
3    long = for example ,
4    foreign = exempli gratia ,
5    foreign-babel = latin ,
6    short-format = \textit ,
7    foreign-format = \textit
8 }
```

```
1 \acsetup{locale/display,first-style=short-long}
2 \acf{eg}
e.g. (Latin: exempli gratia: for example)
```

## 15. Uppercasing

Depending on the kind of abbreviations you have and depending on their definition and maybe also depending on your language the long and sometimes also the short forms need to start with an uppercase letter at the beginning of a sentence while it starts with a lowercase letter otherwise.

For this ACRO provides uppercase versions for all predefined acronym commands listed in section 6. The usage is self-explaining:

```
1 There was \iacl{ufo} hovering \dots \par
2 \Aclp{ufo} were hovering \dots
```

There was an unidentified flying object hovering ...
Unidentified flying objects were hovering ...

If you defined them with uppercase letters to begin with then these commands have no effect, of course.

```
1 \DeclareAcronym{ufo}{
2    short = UFO ,
3    long = Unidentified Flying Object
4 }
```

There are a number of options to control the uppercasing behavior:

#### uppercase/first

The default setting. Converts the first letter to uppercase.

#### uppercase/title

This is just a synonym of first.

#### uppercase/all

Converts *all* letters to uppercase.

#### uppercase/none

Converts all letters to lowercase

```
uppercase/cmd = \{\langle command \rangle\}
```

All of the above options just choose the right command using this option internally. This means you can choose a different behavior altogether by setting this option to something else. For example you could use \capitalisewords from the package mfirstuc [Tal21]. The command needs to have one mandatory argument.

There may be reasons to exclude short forms from being uppercased. This can be controlled by this option:

```
uppercase/short = true|false
```

Initial: true

It allows you to disable the mechanism for the short and alt properties.

## 16. Citing and indexing

#### 16.1. Citing

Acronyms can be given cite keys. This makes it possible to add a citation reference automatically when the acronym is used for the first time.

Let's see an example first. NY has been defined like this:

```
1 \DeclareAcronym{ny}{
2    short = NY ,
3    long = New York ,
4    plural = ,
5    tag = city ,
6    cite = NewYork
7 }
```

The property cite will now trigger ACRO to input \cite{NewYork} after the acronym:

```
ı \ac{ny} New York (NY) [Wik20]
```

Depending on the citation style (and probably other factors, too) it might be desirable to add the citation rather inside the parentheses together with the short form of the acronym and even cited with a different command. For cases like these ACRO offers a number of options:

```
cite/cmd = {\langle citation \ command \rangle} Initial: \cite
```

Choose the command with which citations ar printed.

Decide whether to group citations with the short form in the parentheses. The template must support this. ACRO's pre-defined templates *do* support it.

Decide whether to output the citation in the first/full usage only or always or never.

```
cite/pre = \{\langle text \rangle\}
Initial: \nobreakspace
```

Arbitrary code directly output before the citation.

```
cite/group/cmd = {\( citation command \) \}
Initial: \( cite \)
```

Choose the command with which grouped citations are printed.

```
cite/group/pre = \{\langle text \rangle\} Initial: ,_
```

Arbitrary code directly output before the citation in the grouped case.

If for example you use biblatex's authoryear style [Leh+22] you might want to have settings like these:

```
1 \acsetup{
2  cite/group = true ,
3  cite/cmd = \parencite ,
4  cite/group/cmd = \cite
5 }
```

```
1 \acsetup{cite/display = all}
2 \acf{ny} \\
3 \ac{ny}

New York (NY, Wikipedia 2020)
NY (Wikipedia 2020)
```

#### 16.2. Indexing

Maybe you want to add your acronyms to an index. In that case it is probably desirable to let ACRO make this automatically. In the simplest case just enable it:

index/use = true|false|indexed

Initial: false

Changed in Enable indexing. If indexed is chosen only the acronyms for which the property index has been set are indexed. With true *all* acronyms are indexed.

 $index/cmd = {\langle index \ command \rangle}$ 

Initial: \index

Choose a command for indexing.

 $index/disable = \{\langle code \rangle\}$ 

Initial: \def\@{}

Sometimes it is desirable to change the meaning of a command inside an index entry. For the entries created by ACRO this can be achieved with this option.

index/clear

This option clears the disable list.

While these options set global behavior there are also properties to set them for an acronym individually.

```
index = \{\langle text \rangle\}  (initially empty)
```

This property allows to overwrite the automatic index entry with an arbitrary one.

```
index-sort = \{\langle text \rangle\}
```

if unused then equal to sort

If you use the option index every occurrence of an acronym is recorded to the index and sorted by its short form or (if set) by the value of the sort property. This property allows to set an individual sorting option for the index.

```
no-index = true|false
```

Initial: true

This property allows to exclude an acronym from being indexed.

This manual is an example for the indexing feature. Each acronym from section A on page 57 that has been used in this manual is also listed in the index.

## 17. Barriers

The main purpose of the concept of barriers is to be able to have *local* lists of acronyms. This concept does a little bit more than that, though, which should become clear from the following options:

#### barriers/use = true|false

Initial: false

Activate usage of barriers. Otherwise the command \acbarrier just does nothing except writing a warning in the log.

```
barriers/reset = true|false
```

Initial: false

When set to true the acronym usage is reset for all acronyms at a barrier. The first use of \ac after a barrier will again look like the \acf.

```
barriers/single = true|false
```

Initial: false

When set to true a single usage of an acronym between two barriers with \ac will look according to the chosen style as explained in section 9 on page 14. This option only has an effect when the option single is used as well.

There are two natural barriers in a document: \begin{document} and \end{document}. You can add an arbitrary number of additional barriers with

#### \acbarrier

For this command to have any effect you must set barriers/use to true!

It usually takes two or even three LaTeX runs until acronym usages between barriers are properly counted.

## 18. Trailing tokens

#### 18.1. What is it about?

ACRO has the possibility to look ahead for certain tokens and switch a boolean variable if it finds them. Per default ACRO knows about three tokens: the "dot" (.), the "dash" (-) and the "babel-hyphen" (\babelhyphen).

You have seen an example for this already:

```
1 \DeclareAcronym{etc}{
2    short = etc\acdot ,
3    long = et cetera ,
4    format = \textit ,
5    first-style = long ,
6    plural =
7 }
```

The macro \acdot recognizes if a dot is directly following. It only prints a dot if it doesn't.

```
1 \ac{etc} and \ac{etc}. etc. and etc.
```

Another example: let's say you're a German scientist, you have

```
1 \DeclareAcronym{PU}{
2    short = PU ,
3    long = Polyurethan ,
4    long-plural = e
5 }
```

and you use it the first time like this: \ac{PU}-Hartschaum then according to German orthography and typesetting rules this should be printed as

"Polyurethan(PU)-Hartschaum"

i. e., with no space between long and short form:

```
| \acf{PU}-Hartschaum | Polyurethan(PU)-Hartschaum
```

This works because the template  $long-short^7$  uses  $\acspace$  at the appropriate place and the manual setup does

```
1 \acsetup{trailing/activate = dash}
```

\acspace looks ahead for a trailing dash and adds a space it it doesn't find it.

#### 18.2. How does it work?

Tokens to look for can be defined and activated through the following options:

```
trailing/define = \langle token \rangle \{ \langle name \rangle \}
```

Defines token  $\langle name \rangle$  and tells ACRO look for  $\langle token \rangle$  if  $\langle name \rangle$  is activated.

```
trailing/activate = \{\langle csv \ list \ of \ token \ names \rangle\}
```

Tell ACRO to look for trailing tokens. This is done by giving a csv list of the internal *names* of the tokens. Per default only dot is activated.

```
trailing/deactivate = \{\langle csv | list | of token | names \rangle\}
```

Tell ACRO not to look for trailing tokens. This is done by giving a csv list of the internal *names* of the tokens.

<sup>7.</sup> The template that is used by default for the first appearance.

The package itself does this:

```
1 \acsetup{
2  trailing/define = . {dot} ,
3  trailing/define = {, {comma}} ,
4  trailing/define = - {dash}
5  trailing/define = \babelhyphen {babel-hyphen} ,
6  trailing/activate = {dot,comma}
7 }
```

In order to make use of this mechanism there is the following command:

\* \aciftrailing{ $\langle csv | list | of token | names \rangle$ }{ $\langle true \rangle$ }{ $\langle false \rangle$ }

Check if one of the tokens listed in  $\langle csv | list | of token | names \rangle$  is following and either place  $\langle true \rangle$  or  $\langle false \rangle$  in the input stream.

This command is used to define the two commands you already know:

#### \* \acdot

Inserts \abbrdot if no dot follows.

#### \* \acspace

Inserts a \space if no dash or babel-hyphen follows.

#### \* \abbrdot

Inserts . \@

The definitions are equivalent to the following code:

```
1 \newcommand*\acdot{\aciftrailing{dot}{}{\abbrdot}}
2 \newcommand*\acspace{\aciftrailing{dash,babel-hyphen}{}{\space}}
```

You are of course free to redefine them according to your needs.

## 19. Using or resetting acronyms

Sometimes it is necessary to mark an acronym as used before it actually has been used or to mark an acronym as unused even though it *has* been used. You have already seen one of the commands which make it possible:

```
\acuse{\langle csv | list | of | acronym | ids \rangle}
```

Every acronym given in the list will be marked as used.

#### \acuseall

Every acronym is marked as used.

#### $\acreset{\langle csv \ list \ of \ acronym \ ids \rangle}$

Every acronym given in the list will be reset.

#### \acresetall

Every acronym will be reset.

In a number of contexts all acronym commands act as if their starred form is used: in the table of contents, in the list of figures, and in the list of tables. The same is true for floats and the measuring phase of common table environments like tabularx or ltxtable.

## 20. Bookmarks, backlinks and accessibility support

#### 20.1. Backlinks

When ACRO is used together with the package hyperref [ORT21] then you can make use of the following option:

#### make-links = true|false

Initial: false

If this is activated then every short or alternative appearance of an acronym will be linked to its description in the list of acronyms.

#### link-only-first = true|false

Initial: false

If this is activated in addition to make-links then *only the first* short or alternative appearance of an acronym will be linked to its description in the list of acronyms.

This will fail miserably together with local lists if an acronym appears in more than one list. This *might* be resolved on day.

#### 20.2. Bookmarks

Since bookmarks (which are created by the hyperref or the bookmark packages [Obe20]) can only contain simple text ACRO simplifies the output of the acronym commands when they appear in a bookmark. Although the output can be modified with a dedicated template-mechanism there is no user interface at the moment. Contact me at https://github.com/cgnieder/acro/issues if you need it.

Acronyms have the property pdfstring:

#### $pdfstring = \{\langle pdfstring \rangle\}$

if unused then equal to short

Used as PDF string replacement for the short form in bookmarks when used together with the hyperref [ORT21] or the bookmark package [Obe20].

This is for acronyms like

since v3.5

```
1 \DeclareAcronym{pdf}{
2    short = pdf ,
3    long = Portable Document Format ,
4    short-format = \scshape ,
5    pdfstring = PDF
6 }
```

where the bookmark would write "pdf" instead of "PDF" if the property where not set.

#### 20.3. PDF comments

Some people like see comments in the PDF when they're hovering with the mouse over the short form of an acronym. This can be achieved.

```
pdfcomments/use = true|false
```

Initial: false

This enables the creation of PDF comments.

```
pdfcomments/cmd = \{\langle code \rangle\}
```

Initial: \pdftooltip{#1}{#2}

Chooses the command for actually creating the comment. You must refer to the printed output in the PDF with #1 and to the comment with #2. The default command \pdftooltip is provided by the package pdfcomment [Kle18]. You must load it in order to use it.

Only acronyms where the corresponding property has been set will get comments:

```
pdfcomment = \{\langle text \rangle\}
```

Sets a tooltip description for an acronym.

#### 20.4. Accessibility support

ACRO supports the accsupp package [Obe19] when you also load hyperref. Then ACRO uses

```
1 \BeginAccSupp{ method = pdfstringdef , ActualText = {PDF} }
2 \textsc{pdf}%
3 \EndAccSupp{}%
```

for an acronym defined like this:

```
1 \DeclareAcronym{pdf}{
2    short = pdf ,
3    long = Portable Document Format ,
4    short-format = \scshape ,
5    pdfstring = PDF ,
6    short-acc = PDF
7 }
```

Without accessibility support when a string like "PDF" is copied from the PDF and pasted you get "pdf". If you don't care about that simply don't load accsupp and ignore this section.

You have a few options to be able to manipulate what ACRO does here but I recommend to stay with the default settings:

 $accsupp/use = \underline{true}|false$ 

Initial: true

When this is true and the package accsupp is loaded then accessibility support is used.

 $accsupp/options = {\langle text \rangle}$ 

(initially empty)

Additional option to be passed to \BeginAccSupp. See the accsupp manual for possible settings.

 $accsupp/method = \{\langle method \rangle\}$ 

Initial: pdfstringdef

The method used by \BeginAccSupp. See the accsupp manual for possible values.

The "ActualText" that is used by ACRO always defaults to the values of the acronym properties themselves. You can choose these values individually by setting the corresponding properties:

 $short-acc = \{\langle text \rangle\}$ 

if unused then equal to short

Sets the ActualText property as presented by the accsupp package for the short form of the acronym.

 $long-acc = \{\langle text \rangle\}$ 

if unused then equal to long

Sets the ActualText property as presented by the accsupp package for the long form of the acronym.

 $alt-acc = \{\langle text \rangle\}$ 

if unused then equal to alt

Sets the ActualText property as presented by the accsupp package for the alternative short form of the acronym.

foreign-acc =  $\{\langle text \rangle\}$ 

if unused then equal to foreign

Sets the ActualText property as presented by the accsupp package for the foreign form of the acronym.

 $extra-acc = \{\langle text \rangle\}$ 

if unused then equal to extra

Sets the ActualText property as presented by the accsupp package for the extra information of the acronym.

 $single-acc = \{\langle text \rangle\}$ 

if unused then equal to long-acc

Sets the ActualText property as presented by the accsupp package for a single appearance of the acronym.

 $list-acc = \{\langle text \rangle\}$ 

if unused then equal to list

Sets the ActualText property as presented by the accsupp package for the appearance in the list of acronyms.

Extra care has to be taken for plural forms as these can not be picked up automatically right now. You have to explicitly set them for the accessibility support, too:

```
1 \DeclareAcronym{ufo}{
2    short = UFO ,
3    long = unidentified flying object ,
4    foreign = unbekanntes Flugobjekt ,
5    foreign-plural-form = unbekannte Flugobjekte ,
6    foreign-acc-plural-form = unbekannte Flugobjekte ,
7    foreign-babel = ngerman ,
8    long-indefinite = an
9 }
```

Please note that this mechanism is disabled for inner acronyms if you have nested definitions.

#### 21. Localisation

There are places when ACRO uses text strings which depend on the language of the document. In order to recognize the language from babel of polyglossia and print the strings in the correct language ACRO uses the translations [Nie22].

If the language is detected incorrectly or you want ACRO to use another language than it detects you can use the following option:

```
language = auto | \langle language \rangle
```

Initial: auto

The default setting auto lets ACRO detect the language setting automatically. Valid choices are all language names known to the package translations. Mostly just type your language and it should work.

ACRO only provides support for a handful of languages. You can easily teach ACRO your language – see section 27 on page 48 – if it isn't supported, yet.<sup>8</sup>

```
* \acrotranslate{\langle key \rangle}
```

This command fetches the translation of  $\langle key \rangle$  for the current language. It is meant for usage in template definitions.

Available keywords and their English, French, and German translations are shown in table  $\scriptstyle 1$  on the following page.

#### 22. Patches

In several situations it can lead to wrong results if ACRO marks an acronym as used too early or at all. This is why it is possible to disable the mechanism which is responsible:

<sup>8.</sup> If you like you can always open an issue at https://github.com/cgnieder/acro/issues and provide your translations so I can add them to ACRO.

#### 22. Patches

Key	English	French	German
list-name	Acronyms	Acronymes	Abkürzungen
page	p.	p.	S.
pages	pp.	p.	S.
sequens	f.	sq.	f.
sequentes	ff.	sqq.	ff.
also	also	aussi	auch
or	or	ou	oder
and	and	et	und

TABLE 1: Available translation keywords.

#### \acswitchoff

This disables the mechanism which marks acronyms as used. After this command every acronym command like \ac acts like its starred version.

#### \acswitchon

This command enables the mechanism again.

In certain circumstances ACRO uses these commands itself. For example it is often preferable that acronyms are not counted as used in floats, the table of contents or the lists of figures and tables. This is why ACRO turns the mechanism off in these places.

Certain table environments typeset their contents twice for measurement purposes. ACRO tries to disable the usage mechanism during these phases. The same is true for single line captions from the caption package.

All these patches can be turned off:

```
patch/floats = \underline{true}|false
                                                                                                   Initial: true
                En-/disable the floats patch.
      patch/lists = true|false
                                                                                                   Initial: true
                En-/disable the lists patch for the table of contents, the list of figures and the list of tables.
      patch/tabularx = true|false
                                                                                                   Initial: true
                En-/disable the tabularx patch.
                                                                                                   Initial: true
      patch/longtable = true|false
                En-/disable the longtable patch.
since v3.7
(2022/01/27)
                                                                                                   Initial: true
      patch/ltxtable = true|false
                En-/disable the ltxtable patch.
      patch/tabu = true|false
                                                                                                   Initial: true
                En-/disable the tabu patch.
      patch/caption = true|false
                                                                                                   Initial: true
                En-/disable the caption patch.
```

## Part III.

# **Extending ACRO**

## 23. Background

## 23.1. Templates

One of the core ideas of ACRO version 3.0 is the use of templates which manage how different how anything is printed, from the output of \ac and friends to the list of acronyms. ACRO uses three types of templates:

Initial: true

acronym These templates can be used to define acronym commands, see section 29 on page 49.

**list** These templates are used by the \printacronyms command.

**heading** These templates only make sense if a *list* template uses \acroheading. This command makes use of them.

How these templates are defined, which are available from the start and how they are used is explained in section 24 on the following page.

## 23.2. Objects

ACRO uses certain kinds of objects in some of its commands. It is possible to defines own such objects:

articles Per default only the "indefinite" article is defined. But it is possible to define and add other articles to ACRO. This is explained in section 13.2 on page 23.

endings Per default only the ending "plural" is defined. But it is possible to define and add other endings to ACRO. This is explained in section 12.2 on page 22.

**properties** You have already learned about properties. It is possible to define and add further acronym properties to ACRO. This is explained in section 28 on page 49.

translations ACRO uses localisation strings at a number of places. It is possible to change these strings and add further strings. This is explained in section 21 on page 35.

## 24. Templates

## 24.1. Pre-defined templates

24.1.1. Acronym templates

alt

Display the alternative form of an acronym.

first

This is a *pseudo* template which always displays what is set through the option first-style or the property first-style.

footnote

A template for the first appearance where the long form is printed in a footnote. This template also contains a command \acroendfootnote at the end of the footnote text which in its default definition does nothing.

long

Display the long form of an acronym.

long-short

A template for the first appearance where the long form is printed and the short form follows in parentheses.

short

Display the short form of an acronym.

short-long

A template for the first appearance where the short form is printed and the long form follows in parentheses.

single

A template which is used when the property single has been set *and* the option single has been set *and* if the acronym is only used a single time.

show

A template which writes all properties of an acronym into the log file.

24.1.2. List templates

description

The default list style which places the short form in the item of a description environment and adds the all the rest as description of the item.

lof

A style which mimicks the list of figures. This style does not support page ranges.

since v3.7

#### 24. Templates

longtable

A style that uses a longtable environment for building the list. This needs the longtable package [Car21] loaded.

supertabular

since v3.2

A style that uses a supertabular environment for building the list. This needs the supertabular package [BJ20] loaded.

tabularray

☆ New

A style that uses a custom table environment actblr based on longtblr. This needs the tabularray package [Lyu21] loaded.

tabular

A style that uses a tabular environment for building the list. Since a tabular cannot break across pages this is only suited for short lists.

toc

A style which mimicks the table of contents. This style does not support page ranges.

The templates tabular, longtable, and supertabular support the following option:

templates/colspec =  $\{\langle value \rangle\}$ 

Initial: >{\bfseries}lp{.7\linewidth}

☆ New

It enables you to easily adjust the column specification of the standard table templates to your needs. *Please be aware that you need* exactly *two columns*.

24.1.3. Heading templates

addchap

Only defined in a KOMA-Script class and if \chapter is defined. Uses \addchap for the heading.

addchap

since v3.6

Only defined in a KOMA-Script class and if \chapter is defined. Uses \addchap\* for the heading.

addsed

Only defined in a KOMA-Script class. Uses \addsec for the heading.

addsec\*

since v3.6

Only defined in a KOMA-Script class. Uses \addsec\* for the heading.

chapter

Only defined if \chapter is defined. Uses \chapter for the heading.

chapter\*

Uses \chapter\* for the heading.

none

Displays nothing.

section

Uses \section for the heading.

section\*

Uses \section\* for the heading.

## 24.2. Defining new templates

For the definition of templates these commends are available:

```
\NewAcroTemplate[\langle type \rangle] \{\langle name \rangle\} \{\langle code \rangle\}
```

This defines a template of type  $\langle type \rangle$  with the name  $\langle name \rangle$  which inserts  $\langle code \rangle$  when used. A template of type  $\langle type \rangle$  with name  $\langle name \rangle$  must not exist. The default type is acronym.

```
\RenewAcroTemplate[\langle type \rangle] \{\langle name \rangle\} \{\langle code \rangle\}
```

This re-defines a template of type  $\langle type \rangle$  with the name  $\langle name \rangle$  which inserts  $\langle code \rangle$  when used. A template of type  $\langle type \rangle$  with name  $\langle name \rangle$  must exist. The default type is acronym.

```
\SetupAcroTemplate[\langle type \rangle] \{\langle name \rangle\} \{\langle code \rangle\}
```

Adds  $\langle code \rangle$  to the beginning of the template  $\langle name \rangle$  of type  $\langle type \rangle$ . The default type is acronym.

```
\SetupNextAcroTemplate[\langle type \rangle] \{\langle name \rangle\} \{\langle code \rangle\}
```

Adds  $\langle code \rangle$  to the beginning of *the next use* of the template  $\langle name \rangle$  of type  $\langle type \rangle$ . The default type is acronym.

#### \* \AcroTemplateType

Within a template this expands to the  $\langle type \rangle$  of the current template.

#### \* \AcroTemplateName

Within a template this expands to the  $\langle name \rangle$  of the current template.

How to use these commands is best explained by examples of how the existing templates have been defined. The following sections will show several examples for their usage.

### 24.3. Commands to be used in template definitions

ACRO provides and uses a large number of commands that are meant to be used in template definitions and that often are useless or will raise errors if used outside. Depending on their purpose the commands can be used in different types of templates or only in certain types of templates.

In the descriptions below a \* indicates a fully expandable command when used in an \edef, \write or in \expanded.

A <u>TF</u> always refers to a  $\langle true \rangle$  and  $\langle false \rangle$  branch and indicates that *three* commands exist: one exactly as described, one with only the T and the  $\langle true \rangle$  branch, and one with only the F and the  $\langle false \rangle$  branch. So \acroif<u>TF</u> means there is \acroifTF, \acroifT, and \acroifF, where \acroifT and \acroifF each have an argument less than \acroifTF.

since v3.2

since v3.2

### 24.3.1. Commands for common uses

#### \* \acrolistname

Expands to whatever is currently set with list/name.

## $\acrowrite{\langle property \rangle}$

Prints the property  $\langle property \rangle$  of the current acronym. Depending on the circumstances this prints the property together with an article or an ending either in uppercase or lowercase form. Default is the lowercase form without ending or article. The actual outcome is determined by switches which are explained in section 29 on page 49.

## $\acroformat{\langle type \rangle}{\langle text \rangle}$

This formats  $\langle text \rangle$  according to  $\langle type \rangle$  where  $\langle type \rangle$  has either been set as property or as option from the format module. Valid values are short, long, alt, extra, foreign, list, and first-long.

### $\acroshow{\langle property \rangle}$

For debugging puposes: writes the property  $\langle property \rangle$  of the current acronym to the log file.

```
\acroif TF \{\langle property \rangle\} \{\langle true \rangle\} \{\langle false \rangle\}
```

Checks if the property  $\langle property \rangle$  has been set for the current acronym and either leaves  $\langle true \rangle$  or  $\langle false \rangle$  in the input stream.

## $\acroifbooleanTF\{\langle property\rangle\}\{\langle true\rangle\}\{\langle false\rangle\}$

Returns  $\langle true \rangle$  if the boolean property  $\langle property \rangle$  has been set to true and  $\langle false \rangle$  otherwise.

## $\acroifall TF {\langle properties \rangle} {\langle true \rangle} {\langle false \rangle}$

Checks if all properties in the csv list  $\langle properties \rangle$  have been set for the current acronym and either leaves  $\langle true \rangle$  or  $\langle false \rangle$  in the input stream.

## $\acroifanyTF\{\langle properties \rangle\}\{\langle true \rangle\}\{\langle false \rangle\}$

Checks if any of the properties in the csv list  $\langle properties \rangle$  has been set for the current acronym and either leaves  $\langle true \rangle$  or  $\langle false \rangle$  in the input stream.

```
\acroiftagTF\{\langle tag \rangle\}\{\langle true \rangle\}\{\langle false \rangle\}
```

Checks if the current acronym has been given the tag  $\langle tag \rangle$  and either leaves  $\langle true \rangle$  or  $\langle false \rangle$  in the input stream.

```
\acroifstarredTF\{\langle true \rangle\}\{\langle false \rangle\}
```

Checks if the current call of the acronym is a starred command or not and either leaves  $\langle true \rangle$  or  $\langle false \rangle$  in the input stream.

### $\AcroPropertiesMap\{\langle code \rangle\}\$

Maps over all defined acronym properties. Within  $\langle code \rangle$  you can refer to the current property with #1.

#### $\AcroAcronymsMap{\langle code \rangle}$

Maps over all defined acronyms. Within  $\langle code \rangle$  you can refer to the current property with #1 or with \AcronymID.

since v3.5

since v3.5

since v<sub>3.1</sub> (2020/05/03)

**\AcroMapBreak** 

since v<sub>3.5</sub>

since v<sub>3.5</sub> Stops the map \AcroAcronymsMap and is usually used in combination with a boolean check.

 $\AcroPropertiesSet{\langle id \rangle}{\langle csv \ list \ of \ properties \rangle}$ 

Allows the setting of properties of acronym  $\langle id \rangle$  outside of \declareAcronym.

24.3.2. Commands for usage in acronym templates

\* \acroifused $TF\{\langle true \rangle\}\{\langle false \rangle\}$ 

Checks if the current acronym has been used before and either leaves  $\langle true \rangle$  or  $\langle false \rangle$  in the input stream.

```
\acroiffirst TF {\langle true \rangle} {\langle false \rangle}
```

Checks if the current usage of the current acronym is the first time and either leaves  $\langle true \rangle$  or  $\langle false \rangle$  in the input stream.

```
\acroifsingleTF\{\langle true \rangle\}\{\langle false \rangle\}
```

Checks if the current acronym is used a single time and either leaves  $\langle true \rangle$  or  $\langle false \rangle$  in the input stream.

\acrogroupcite

24.3.3. Commands for usage in list templates

\*\acroifchapter $\overline{TF}\{\langle true \rangle\}\{\langle false \rangle\}$ 

This just check if \chapter is defined. Used in the toc template.

\* \acroifpagesTF{ $\langle true \rangle$ }{ $\langle false \rangle$ }

This is  $\langle true \rangle$  if the option pages/display is set, and the current acronym is not single, and has at least one page number.  $\langle false \rangle$  otherwise.

```
\acropages{\langle first \rangle}{\langle range \rangle}
```

If \acroifpages  $\overline{\mathit{TF}}$  would be  $\langle \mathit{false} \rangle$  this would do nothing. Otherwise, if pages/display is first it prints the first page number, preceded by  $\langle \mathit{first} \rangle$  if pages/name is true. If pages/display is all it prints the page range, preceded by  $\langle \mathit{range} \rangle$  if pages/name is true.

## \acronopagerange

This disables page ranges. Used in the toc and lof templates.

\acroneedpages

This enables the page number displayed. Used in the *toc* and *lof* templates.

\acropagefill

since v3.4

If  $\acroifpages \underline{\mathit{TF}}$  would be  $\acksigma false$  this would do nothing. Otherwise it prints whatever is set by pages/fill.

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### $\acronymsmap{\langle code \rangle}$

Maps over the acronyms in order of appearance in the list. Which acronyms these are depends on settings. They might only have certain tags, be ones local to barriers, ...

Within  $\langle code \rangle$  #1 refers to the current ID of the acronym. Also \AcronymID expands to the current ID. The latter is important for all the commands that check or print properties of acronyms.

```
\acronymsmap TF \{\langle code \rangle\} \{\langle true \rangle\} \{\langle false \rangle\}
```

This does the same as  $\acronymsmap$  and also leaves  $\langle true \rangle$  in the input stream if the list is not empty and  $\langle false \rangle$  otherwise. This is useful to trigger a rerun warning.

#### **\AcronymTable**

This is an empty token list at the beginning of a list template.

```
\AcroAddRow{\langle code \rangle}
```

Adds  $\langle code \rangle$  to the right of \AcronymTable and ensures that \AcronymID has the correct global definition for this code. With this the code for the tabular template and other table templates can be built in a comfortable way.

```
\AcroNeedPackage{\langle package \rangle}
```

Checks if the package  $\langle package \rangle$  is loaded and throws an error otherwise.

#### \AcroRerun

Triggers ACRO to throw an "empty list" rerun warning.

## **24.4.** New acronym templates

Some templates are quite short and self-explaining:

```
1 \NewAcroTemplate{short}{\acrowrite{short}}
```

Some are a little bit more elaborate:

```
1 \NewAcroTemplate{alt}{%
2 \acroifTF{alt}
3 {\acrowrite{alt}}
4 {\acrowrite{short}}%
5 }
```

And some templates need to do a lot more:

```
NewAcroTemplate{long-short}{%
    \acroiffirstTF{%
    \acrowrite{long}%
```

```
4  \acspace(%
5   \acroifT{foreign}{\acrowrite{foreign}, }%
6   \acrowrite{short}%
7   \acroifT{alt}{ \acrotranslate{or} \acrowrite{alt}}%
8   \acrogroupcite
9  )%
10  }%
11  {\acrowrite{short}}%
12 }
```

## 24.5. New list templates

This section shows the definition of three templates: *description*, *tabular*, and *toc*. First the *description* template:

```
1 \NewAcroTemplate[list]{description}{%
    \acroheading
    \acropreamble
    \begin{description}
      \acronymsmapF{%
        \item[\acrowrite{short}\acroifT{alt}{/\acrowrite{alt}}]
          \acrowrite{list}%
          \acroifanyT{foreign,extra}{ (}%
          \acroifT{foreign}{\acrowrite{foreign}\acroifT{extra}{, }}%
          \acroifT{extra}{\acrowrite{extra}}%
          \acroifanyT{foreign,extra}{)}%
11
          \acropagefill
          \acropages
13
            {\acrotranslate{page}\nobreakspace}
14
            {\acrotranslate{pages}\nobreakspace}%
15
        }
        {\item\AcroRerun}
17
    \end{description}
18
19 }
```

The following shows how to define templates using some kind of table environment. Special care is necessary due to the way Lately tables work: first the table body is built and only then the table itself is printed:

```
1 \NewAcroTemplate[list]{tabular}{%
2  \AcroNeedPackage{array}%
3  \acronymsmapF{%
4  \AcroAddRow{
5  \acrowrite{short}%
```

```
\acroifT{alt}{/\acrowrite{alt}}
        \acrowrite{list}%
        \acroifanyT{foreign,extra}{ (}%
        \acroifT{foreign}{\acrowrite{foreign}\acroifT{extra}{, }}%
        \acroifT{extra}{\acrowrite{extra}}%
        \acroifanyT{foreign,extra}{)}%
12
        \acropagefill
        \acropages
14
          {\acrotranslate{page}\nobreakspace}
15
          {\acrotranslate{pages}\nobreakspace}%
16
        \tabularnewline
17
      }%
    }
19
    {\AcroRerun}%
    \acroheading
    \acropreamble
    \par\noindent
23
    \begin{tabular}{>{\bfseries}lp{.7\linewidth}}
24
      \AcronymTable
    \end{tabular}
27 }
```

```
1 \NewAcroTemplate[list]{toc}{%
    \acroheading
    \acropreamble
    \acronopagerange
    \acronymsmapF{%
      \contentsline{\acroifchapterTF{chapter}{section}}
        {\acrowrite{short}\acroifT{alt}{/\acrowrite{alt}}}
      \contentsline{\acroifchapterF{sub}section}
          \acrowrite{list}%
11
          \acroifT{foreign}{\acrowrite{foreign}\acroifT{extra}{, }}%
          \acroifT{extra}{\acrowrite{extra}}%
13
          \acroifanyT{foreign,extra}{)}%
14
15
        {\acropages{}{}}
        {}%
17
    }
18
    {\AcroRerun}
20 }
```

## 24.6. New heading templates

Let's take a look at the two templates *section* and *section\** which should give you enough information to build your own:

```
1 \NewAcroTemplate[heading]{section} {\section {\acrolistname}}
2 \NewAcroTemplate[heading]{section*}{\section*{\acrolistname}}
```

## 25. Endings

Referring to section 12.2 on page 22 this section explains how to define and use additional endings.

```
\DeclareAcroEnding\{\langle name \rangle\}\{\langle short\ default \rangle\}\{\langle long\ default \rangle\}
```

This command can be used to define properties and options analoguous to the plural endings which have been defined this way:

```
1 \DeclareAcroEnding{plural}{s}{s}
```

In general \DeclareAcroEnding{ $\langle foo \rangle$ }{ $\langle x \rangle$ }{ $\langle y \rangle$ } defines these options

```
short - \langle foo \rangle - ending = \{\langle value \rangle\}
                                                                                                                                                                        Initial: \langle x \rangle
long - \langle foo \rangle - ending = \{\langle value \rangle\}
                                                                                                                                                                        Initial: \langle y \rangle
    and these properties
short - \langle foo \rangle = \{ \langle value \rangle \}
                                                                                                                                                                        Initial: \langle x \rangle
short - \langle foo \rangle - form = \{\langle value \rangle\}
                                                                                                                                                              (initially empty)
alt - \langle foo \rangle = \{\langle value \rangle\}
                                                                                                                                                                        Initial: \langle x \rangle
alt-\langle foo \rangle - form = \{\langle value \rangle\}
                                                                                                                                                              (initially empty)
long - \langle foo \rangle = \{\langle value \rangle\}
                                                                                                                                                                        Initial: \langle \gamma \rangle
long - \langle foo \rangle - form = \{\langle value \rangle\}
                                                                                                                                                              (initially empty)
foreign - \langle foo \rangle = \{\langle value \rangle\}
                                                                                                                                                                        Initial: \langle y \rangle
foreign - \langle foo \rangle - form = \{\langle value \rangle\}
                                                                                                                                                              (initially empty)
single - \langle foo \rangle = \{ \langle value \rangle \}
                                                                                                                                                                        Initial: \langle y \rangle
single - \langle foo \rangle - form = \{\langle value \rangle\}
                                                                                                                                                              (initially empty)
```

In addition another command is defined which is meant to be used in template definitions.

### \acro\{foo\

This command tells the template that the ending  $\langle foo \rangle$  should be used.

Section 29 on page 49 has an example of how this can be used to define a possessive ending and commands that make use of them like this:

1 \acfg{MP} Member's of Parliament (MP's)

### 26. Articles

Referring to section 13.2 on page 23 this section explains how to define and use additional articles.

```
\DeclareAcroArticle{\langle name \rangle} {\langle default \rangle}
```

This command can be used to define properties and options analoguous to the indefinite article which have been defined this way:

```
1 \DeclareAcroArticle{indefinite}{a}
```

In general \DeclareAcroArticle{ $\langle foo \rangle$ }{ $\langle x \rangle$ } defines the option

```
\langle foo \rangle = \{\langle value \rangle\} Initial: \langle x \rangle
```

and these properties

$$\mathsf{short} \text{-} \langle foo \rangle = \{ \langle value \rangle \}$$
 Initial:  $\langle x \rangle$ 

$$alt-\langle foo \rangle = \{\langle value \rangle\}$$
 Initial:  $\langle x \rangle$ 

$$long - \langle foo \rangle = \{\langle value \rangle\}$$
 Initial:  $\langle x \rangle$ 

foreign-
$$\langle foo \rangle = \{\langle value \rangle\}$$
 Initial:  $\langle x \rangle$ 

$$single - \langle foo \rangle = \{\langle value \rangle\}$$
Initial:  $\langle x \rangle$ 

$$extra-\langle foo \rangle = \{\langle value \rangle\}$$
 Initial:  $\langle x \rangle$ 

In addition another command is defined which is meant to be used in template definitions.

### $\accro(foo)$

This command tells the template that the article  $\langle foo \rangle$  should be used.

Section 29 on page 49 has examples of how this can be used to define definite articles and commands that make use of them like this:

```
l'HADOPI
la Haute Autorité pour la diffusion des œuvres et la protection des droits sur l'Internet
```

## 27. Translations

For adding additional keywords, or for adding translations to existing keywords, or for changing existing translations ACRO uses this command:

```
\DeclareAcroTranslation\{\langle key \rangle\}\{\langle language=translation\ list \rangle\}
```

With this command new translations keywords can be added and translations for existing keywords can be changed.

```
\AddAcroTranslations{\langle key \rangle}{\langle language=translation\ list \rangle}
```

Basically the same but this time per language rather than per keyword.

As an example this is how ACRO declares translations for the pages keyword:

```
1 \DeclareAcroTranslation{pages}{
2  Fallback = pp\abbrdot ,
3  English = pp\abbrdot ,
4  French = pp\abbrdot ,
5  German = S\abbrdot ,
6  Portuguese = pp\abbrdot
7 }
```

Translations for a language could be added this way 9:

```
1 \AddAcroTranslations{Italian}{
2  list-name = Acronimi ,
3  page = p\abbrdot ,
4  pages = pp\abbrdot ,
5  sequens = s\abbrdot ,
6  sequentes = ss\abbrdot ,
7  also = anche ,
8  and = e ,
9  or = 0
```

The existing keywords had been shown in table 1 on page 36.

<sup>9.</sup> ACRO already has the translations for Italian.

## 28. Properties

As you know from section 5 ACRO comes with quite a number of predefined properties which control various aspects of acronyms. However, there are cases when additional properties would be nice to have and to use. It can be done with the following command:

## \DeclareAcroProperty\*?! $|>{\langle name \rangle}$ }

This defines the new property  $\langle name \rangle$ . The command has five optional arguments most of which you probably never need.

The optional star \* ensures that each acronym gets a *unique* value for the property.

The optional question mark? creates a *boolean* property. That is a property that only can get the values true or false and when it is used without value (not an empty value!) then true is assumed.

The optional exclamation mark! creates a *mandatory* property. An error is raised if an acronym does not set it.

The optional pipe | creates a *static* property which means its value is written to an auxiliary file and read in again at begin document. Once set the value is the same throughout the document.

The optional greater as symbol > creates a *display* property. This additionally defines the two boolean options  $\langle name \rangle / \text{display}$  and  $\text{list} / \langle name \rangle / \text{display}$ , both initially set to true. If these options are set to false the acronym commands or the list act as if the property  $\langle name \rangle$  has not been set. The foreign property is an example.

```
\DeclareAcroPropertyAlias*?!|>\{\langle name1\rangle\}\{\langle name2\rangle\}
```

This newly declares property  $\langle name1 \rangle$  and makes it an alias of property  $\langle name2 \rangle$ . This means that  $\langle name1 \rangle$  gets the same value that  $\langle name2 \rangle$  has unless it is set explicitly. Property  $\langle name2 \rangle$  must exist.

```
\MakeAcroPropertyAlias\{\langle name1\rangle\}\{\langle name2\rangle\}\
```

This makes property  $\langle name1 \rangle$  and makes it an alias of property  $\langle name2 \rangle$ . Both properties must exist.

Exmaples for defining and using new properties are shown in section A, for example, examples 8 or 9.

## 29. Own acronym commands

## 29.1. Background

You can define own acronym commands or redefine the existing ones with commands similar to \NewDocumentCommand from the xparse package [L<sub>3</sub>P].

```
\NewAcroCommand\{\langle command\rangle\}\{\langle arg. spec.\rangle\}\{\langle code\rangle\}
```

This creates the new command  $\langle command \rangle$  with the argument specification <sup>10</sup> so $\langle arg. spec. \rangle$  and

since v<sub>3.2</sub>

<sup>10.</sup> in the sense of an xparse command.

replacement text  $\langle code \rangle$ . There are significant differences to <code>NewDocumentCommand</code>: the new command always has two additional arguments: an optional star and an optional argument for options. You can ignore this fact in your definition, though. However, the command must at least have one argument and the first argument must refer to the ID. Everything else is up to you.

The new command has the suiting framework to recognize trailing tokens, count usage, index, and add a citation if necessary.

```
\RenewAcroCommand{\langle command \rangle} {\langle arg. spec. \rangle} {\langle code \rangle}
```

Like \NewAcroCommand but redefines an existing command.

```
\UseAcroTemplate[\langle type \rangle] \{\langle name \rangle\} [\langle argument\ number \rangle] \langle arguments \rangle
```

The argument  $\langle type \rangle$  defaults to acronym and  $\langle argument\ number \rangle$  defaults to 1. The command must be followed by as many mandatory arguments as you specify with  $\langle argument\ number \rangle$ . All predefined acronym templates use the first argument as ID so they must use one argument.

Let's see an example. This is the definition of \ac:

```
1 \NewAcroCommand\ac{m}{\UseAcroTemplate{first}{#1}}
```

Equivalent definitions would be:

```
\\NewAcroCommand\ac{m}{\UseAcroTemplate[acroynm]{first}{#1}}
\\NewAcroCommand\ac{m}{\UseAcroTemplate[acroynm]{first}[1]{#1}}
\\NewAcroCommand\ac{m}{\UseAcroTemplate{first}[1]{#1}}
\\NewAcroCommand\ac{m}{\UseAcroTemplate{first}[2]{#1}}}
\\\NewAcroCommand\ac{m}{\UseAcroTemplate{first}[2]{#1}}}\)
```

There are a number of switch commands which determine a certain behavior. They tell the following template how to interpret certain conditionals and how to use \acrowrite.

#### \acrocite

Tells **ACRO** to output the citation.

#### \acrodonotuse

Tells ACRO to not count this as usage.

#### \acroplural

Use plural form.

#### \acroindefinite

Use indefinite article

#### \acroupper

Use uppercase form.

#### \acrofull

Use first or full form.

Here is an example that makes use of them:

## 29.2. Create commands for possessive endings

Let's say you want to add an ending for the genitive case. First you define the appropriate ending:

```
1 \DeclareAcroEnding{possessive}{'s}{'s}
```

Then you define commands which make use of this ending:

```
1 \NewAcroCommand\acg{m}{\acropossessive\UseAcroTemplate{first}{#1}}
2 \NewAcroCommand\acsg{m}{\acropossessive\UseAcroTemplate{short}{#1}}
3 \NewAcroCommand\aclg{m}{\acropossessive\UseAcroTemplate{long}{#1}}
4 \NewAcroCommand\acfg{m}{%
5 \acrofull
6 \acropossessive
7 \UseAcroTemplate{first}{#1}%
8 }
9 \NewAcroCommand\iacsg{m}{%
10 \acroindefinite
11 \acropossessive
12 \UseAcroTemplate{short}{#1}%
13 }
```

You maybe also define acronyms with corresponding properties 11:

```
    \DeclareAcronym{MP}{
        short = MP ,
        long = Member of Parliament ,
        plural-form = Members of Parliament ,
        long-possessive-form = Member's of Parliament
    }
}
```

<sup>11.</sup> Bear with me if this is incorrect: English is not my native language.

Now you can use it like this:

```
This is the \acg{MP} first day at work after \dots

This is the MP's first day at work after ...
```

## 30. Own ACRO style files

When you want to use your definitions regarding ACRO repeatedly then it makes sense to put them in a file which you put somewhere in your local LATEX tree. There are three options:

- 1. Put them in a simple .tex file in \input it.
- 2. Put in in a .sty file and include it with \usepackage after ACRO.
- 3. Create a style file following this pattern decribed below.

```
acro.style.\langle name \rangle.code.tex
```

This file should start with

```
1 \AcroStyle{name}
```

and input the file with \acsetup using the option

```
load-style = \{\langle name \rangle\}
```

This is more or less the same as if you'd use the package variant but naturally ensures that you load it after ACRO and in the future might provide other bells and whistles, too.

The command

```
\AcroStyle*{\langle style \rangle}[\langle details \rangle]
```

has an optional star which switches to expl3 syntax. It also has an optional argument  $\langle details \rangle$  with the same purpose and usage as the one from  $\ProvidesPackage$ . A typical usage would look like

```
1 \AcroStyle{abbrev}[2020/04/21 abbreviations with acro (CN)]
2 \NewDocumentCommand\newabbreviation{mmm}{%
3  \DeclareAcronym{#1}{ short = #2 , #3 , class = abbrev , no-index }%
4 }
5 \NewDocumentCommand\printabbreviations{0{}}{%
6  \printacronyms[#1,include=abbrev]%
7 }
```

## Part IV.

## **Appendix**

## A. Examples

```
Example 1: Basic usage
Links: [TEX] [PDF]

File: acro.example.basic.tex

7
8 \acsetup{
9 make-links ,
10 pages / display = first ,
11 pages / fill = {, }
12 }
13
14 \DeclareAcronym{CDMA}{
In the early nineties, GSA fered for the first time into use of Time Division Mul
```

### A. Examples

```
Example 3: Invisible command for backref
Links: [TEX] [PDF] [github]

File: acro.example.issue-109.tex

pages/seq=false

| Possible command for backref
| Possible command for backref
| File: acro.example.issue-109.tex

| Possible command for backref
| Possible command for backr
```

```
Example 4: Defining a definite article
Links: [TFX] [PDF] [github]
                                                File: acro.example.issue-111.tex
7 \NewAcroCommand\dacs{m}{\acrodefinite\
   UseAcroTemplate{short}{#1}}
                                                            l'HADOPI
8 \NewAcroCommand\Dacs{m}{\acroupper\acrodefinite\
                                                            La Haute Autorité po
   UseAcroTemplate{short}{#1}}
                                                         sur Internet
9 \NewAcroCommand\dacl{m}{\acrodefinite\
   UseAcroTemplate{long}{#1}}
10 \NewAcroCommand\Dacl{m}{\acroupper\acrodefinite\
   UseAcroTemplate{long}{#1}}
12 \DeclareAcronym{hadopi}{
    short = HADOPI ,
13
    long = Haute Autorit\'{e} pour la diffusion des
    ∖oe uvres et la protection des
```

```
Example 5: Write the list of acronyms to an external file
Links: [TEX] [PDF] [github]
                                                 File: acro.example.issue-119.tex
      \immediate\openout\acro@list\jobname.ac\relax
      \immediate\write\acro@list{\string\begin{
   description}}
      \let\item\relax
      \acronymsmapF{%
10
        \immediate\write\acro@list{%
11
          \space\space
12
          \item[\acrofield{##1}{short}]
13
          \acrofield{##1}{list}%
14
```

## Example 6: Insert word between acronym and citation Links: [TEX] [PDF] [github] File: acro.ex

File: acro.example.issue-154.tex

```
short = UC ,
long = Universal Composability ,
cite = xxx
begin{document}

where the lacture of the lacture
```

We use the Universal

# Example 7: How to define a possessive ending Links: [TFX] [PDF]

File: acro.example.possessive.tex

```
7 \NewAcroCommand\acsg{m}{\acropossessive\
    UseAcroTemplate{short}{#1}}
8 \NewAcroCommand\aclg{m}{\acropossessive\
    UseAcroTemplate{long}{#1}}
9 \NewAcroCommand\acfg{m}{%
10 \acrofull
11 \acropossessive
12 \UseAcroTemplate{first}{#1}%
13 }
14 \NewAcroCommand\iacsg{m}{%
```

Member's of Parliame MP's Member's of Parliame Member's of Parliame a MP's

## Example 8: Additional alternative form Links: [TEX] [PDF] [forum]

File: acro.example.texsx-505891.tex

```
7 \RenewAcroTemplate[list]{description}{%
8  \acroheading
9  \acropreamble
10  \begin{description}
11  \acronymsmapF{
12  \item [%
13  \acrowrite{short}%
14  \acroifT{alt}{/}\acrowrite{alt}%
```

## Acronyms

four another description
one/two/three common

## A. Examples

#### Example 9: Foreign short form Links: [TEX] [PDF] [forum] File: acro.example.texsx-507726.tex 8 \RenewAcroTemplate{long-short}{% Datenschutz-Grundve \acroiffirstTF{% lation", GDPR) \acrowrite{long}\acspace 10 (% 11 \acrowrite{short}% Abkürzungen \acroifT{foreign}{, }% 13 \acrowrite{foreign}% **DSGVO** Datenschutz-G tion", GDPR)

```
Example 10: Species
Links: [TEX] [PDF] [forum]

7  #1 ,
8  tag = species ,
9  first-style= long ,
10  format = \itshape
11  }%
12 }
13 \newspecies{ecoli}{E.~coli}{Escherichia coli}
File: acro.example.texsx-513623.tex

First use: Escherichia Second use: E. coli
```

```
Example 11: Capitalization

Links: [TEX] [PDF] [forum]

File: acro.example.texsx-515295.tex

short = 3-APA ,

long = \iupac{3-azido-1-propyl|amine}

how the long = \iupac{3-azido-1-propyl|amine}

short = \enquote{\click} \chemistry ,

long = copper(I)-catalyzed azide-alkyne

cycloaddition

1: 3-Azido-1-propylan

2: "Click" chemistry

3: Copper(I)-catalyzed
```

# Example 12: Articles and possessive forms Links: [TEX] [PDF] [forum]

File: acro.example.texsx-542461.tex

```
7 \NewAcroCommand\Dac{m}{\acroupper\acrodefinite\
        UseAcroTemplate{first}{#1}}
8
9 \NewAcroCommand\Dacg{m}{%
10 \acroupper
11 \acrodefinite
12 \acropossessive
13 \UseAcroTemplate{first}{#1}%
14 }
```

Bob hails from the Ce Bob hails from CSS. The Centre for Spagh CSS's mandate is broa The Centre for Spagh CSS scientists eat wel

## **B.** Acronyms

Below all abbreviations are listed which have been defined for the manual. The ones without page numbers have been defined but haven't been used.

CD compact disc
CTAN Comprehensive TEX Archive Network
e.g. for example (Latin: exempli gratia)25
<b>ECU</b> Steuergerät ( <i>Englisch</i> : Electronic Control Unit)
<b>etc.</b> et cetera
<b>HADOPI</b> Haute Autorité pour la diffusion des œuvres et la protection des droits sur l'Internet 48
ID identification string
JPEG/JPG Joint Photographic Experts Group
LA Los Angeles
LPPL LATEX Project Public License
MP Member of Parliament
NATO Organisation des Nordatlantikvertrags (Englisch: North Atlantic Treaty Organization)
NY New York
PDF Portable Document Format
PNG Portable Network Graphics

## C. References

<b>PU</b> Polyu	ırethan30				
<b>SW</b> Samı	melwerk22				
T <sub>E</sub> X.sx T <sub>E</sub>	X StackExchange				
UFO unio	dentified flying object (German: unbekanntes Flugobjekt)				
C. References					
[BJ20]	Johannes Braams and Theo Jurriens. supertabular. version 4.1g, Feb. 2, 2020 (or newer). url: https://www.ctan.org/pkg/supertabular/.				
[Bra22]	Johannes Braams, current maintainer: Javier Bezos. babel. version 3.70, Jan. 26, 2022 (or newer). url: https://www.ctan.org/pkg/babel/.				
[Car21]	David Carlisle. longtable. version 4.17, Sept. 1, 2021 (or newer). URL: https://www.ctan.org/pkg/longtable/.				
[Cha21]	François Charette, current maintainer: Arthur Reutenauer. polyglossia. version 1.53, Apr. 12, 2021 (or newer). URL: https://www.ctan.org/pkg/polyglossia/.				
[Kle18]	Josef Kleber. pdfcomment. version 2.4a, Nov. 1, 2018 (or newer). URL: https://www.ctan.org/pkg/pdfcomment/.				
[L <sub>3</sub> P]	THE IATEX3 PROJECT TEAM. xparse. Jan. 12, 2022 (or newer). URL: https://www.ctan.org/pkg/xparse/.				
[Leh+22]	Philipp Lehman et al., current maintainers: Philip Kime and Moritz Wemheuer. biblatex. version 3.17, Feb. 2, 2022 (or newer). URL: https://www.ctan.org/pkg/biblatex/.				
[Lyu21]	Jianrui Lyu. tabularray. version 2021Q, Dec. 1, 2021 (or newer). URL: https://www.ctan.org/pkg/tabularray/.				
[Nie22]	Clemens NIEDERBERGER. translations. version 1.12, Feb. 5, 2022 (or newer). URL: https://www.ctan.org/pkg/translations/.				
[Obe19]	Heiko Oberdiek. accsupp. version o.6, Dec. 5, 2019 (or newer). URL: https://www.ctan.org/pkg/oberdiek/.				
[Obe20]	Heiko Oberdiek. bookmark. version 1.29, Nov. 6, 2020 (or newer). URL: https://www.ctan.org/pkg/bookmark/.				
[ORT21]	Heiko Oberdiek, Sebastian Rahtz, and The IATEX3 Project Team. hyperref. version 7.00m, June 7, 2021 (or newer). URL: https://www.ctan.org/pkg/hyperref/.				
[Tal21]	Nicola L.C. TALBOT. mfirstuc. version 2.07, Oct. 15, 2021 (or newer).				

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