ACRO

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Typeset Acronyms

Clemens Niederberger

https://bitbucket.org/cgnieder/acro/contact@mychemistry.eu

English documentation

ACRO not only allows you to create acronyms in a simple way but also lets you add them to different classes of acronyms. Lists can be created of separate classes wherever you want the list to appear.

ACRO also provides an option single which ignores acronyms that are used only once in the whole document.

As an experimental feature ACRO also offers the option sort which automatically sorts the list created by \printacronyms.

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1. Licence and Requirements

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

ACRO loads and needs the following packages: expl3,1 xparse,2 xtemplate3 and l3keys2e.4

2. About

Acronyms and initialisms are abbreviations formed from the initial components in a phrase or a word. These components may be individual letters (as in CEO) or parts of words (as in Benelux and Ameslan). There is no universal agreement on the precise definition of the various terms nor on written usage.

[Wik12a]

After Wikipedia told us what acronyms are and we won't confuse them with units or other kinds of abbreviations – why would we need another package for them? There are several already: acronym⁵ [Oetio], acromake⁶ [Tho95], acroterm⁷ [Vosio], the abbreviations package abbrevs⁸ [Swioi] (the current version 1.4 has a bug,⁹ though), the nomenclature package nomencl¹⁰ [Vey+o5], and of course the mighty glossaries¹¹ [Tal11]. So there is really no *need* for a new package.

On the other hand acronym, the best of the acronym specific packages, has one or two shortcomings and sometimes using glossaries seems a bit of an overkill (or simply inconvenient as one has to run makeglossaries, makeindex or xindy, then). So ACRO stands somewhere in between (but much closer to acronym).

The main reason for the existance of ACRO is a question on {TeX}.SE¹² which intrigued me and in consequence led to ACRO and it's option single.

ACRO has many similarities with the acronym package. In fact, quite some macros have the same name and meaning.¹³

3. Basics

3.1. Creating New Acronyms

Acronyms are created with the command \DeclareAcronym that can only be used in the preamble.

\DeclareAcronymFormat{<id>){<format>} % can be used only in preamble

\DeclareAcronymCitation{<id>}[][<post>]{<cite keys>} % can be used only in preamble

¹ CTAN: expl₃ ² CTAN: xparse acromake ⁷ CTAN: acroterm ⁸ CTAN: abbrevs ⁹ see http://tex.stackexchange.com/q/59840/5049 for solutions. ¹⁰ CTAN: nomencl ¹¹ CTAN: glossaries ¹² http://tex.stackexchange.com/q/59449/5049 ¹³ Not in the sense of \meaning!

\DeclareAcronymPDFString{<id>}{<pdf entry>,<plural ending>} % can be used only
in preamble

Although \DeclareAcronym has quite a number of arguments. In the simplest case you'll only need three:

This creates the acronym "ST" with the ID "test" and the long form "Some Test." The other arguments will be described later in this document.

\DeclareAcronymFormat lets you assign a special format to an acronym. Maybe small caps:

```
1 % preamble:
2 \DeclareAcronym{ot}{ot}{Other Test}
3 \DeclareAcronymFormat{ot}{\scshape}
```

The short form now looks like this: OT.

With \DeclareAcronymCitation you can add a key as used in \cite that is added to the first or every appearance of the acronym (depending on an option that is described later).

The first appearance now looks as follows¹⁴: New York (NY) [Wik12b].

3.2. Using the Acronyms – the Commands

Acronyms are used with with one of the following commands:

 $\ac *{<id>}$ \rightarrow basic command; the first output is different from subsequent ones.

 $\Ac*{<id>}$ \rightarrow same as \ac but capitalizes the first letter of the long form.

¹⁴ The appearance of the citation of course depends on the citation style you're using.

```
\acs*{<id>} → short form; the actual acronym.
\acl*{<id>} → long form; the meaning of the acronym.
\Acl*{<id>} → same as \acl but capitalizes first letter.
\aca*{<id} → alternative short form as specified in the [<short>] argument of \DeclareAcronym; if it hasn't been specified this is identical to \acs.
\acf*{<id>} → first form; output like the first time \ac is output.
\Acf*{<id>} → same as \acf but capitalizes first letter of the long form.
\acp*{<id>} → plural form of \ac;
\Acp*{<id>} → same as \acp but capitalizes first letter of the long form.
\acsp*{<id>} → plural form of \acs;
\aclp*{<id>} → plural form of \acs;
\acp*{<id>} → plural form of \acp*{<id>} → plural form of \accidenter first letter of the long form.
```

If an acronym is used the first time with \ac its output is different from subsequent uses. To be clear on this: the first time! If the acronym has been used with any of the output commands before it is not the first time any more.

If you use the starred variant an acronym will not be marked as used. This proves useful if an acronym is typeset in a section title, for example, since then the appearance in the table of contents won't mark it as used.

```
preamble: \DeclareAcronym{cd}{cd}{Compact Disc}

preamble: \DeclareAcronymFormat{cd}{\scshape}

first time: \ac{cd} \\
second time: \ac{cd} \\
short: \acs{cd} \\
alternative: \aca{cd} \\
first again: \acf{cd} \\
long: \acl{cd} \\
short plural: \acsp{cd} \\
long plural: \aclp{cd}
```

Introduced in version 0.5

```
first time: Compact Disc (CD)
second time: CD
short: CD
alternative: CD
first again: Compact Disc (CD)
long: Compact Disc
short plural: CDs
long plural: Compact Discs
```

3.3. Plural Forms

If an acronym is defined in the standard way ACRO uses an 's' that's appended to both the short and the long form when one of the plural commands is used. However, that is not always the best solution. For one thing not all acronyms may have a plural form. Second, the plural form especially of the long forms may be fomed differently. And third, other languages can have other plural endings.

For this reason \DeclareAcronym provides additional arguments:

```
\DeclareAcronym{<id>}{<short>,<plural ending>}{<long>,<plural ending>}
\DeclareAcronym*{<id>}{<short>,<plural ending>}{<long>,<plural form>}
```

These arguments are optional. If they're not used, the default setting is 's'. If you use the starred version the long form will be replaced by the specified plural form when necessary. A given short plural will still be appended.

3.4. Alternative Short Forms

For some acronyms it might be useful to have alternative forms. For this \DeclareAcronym has another optional argument:

\DeclareAcronym{<id>){<short>}[<alternative>]{<long>}

The alternative form uses the same plural ending as the default short form and is formatted in the same way.

3.5. Extra Information for the List Entry

Of course you can print a list of acronyms where their meaning is explained. Sometimes it can be useful to add additional information there. This is done with another optional argument to \DeclareAcronym:

```
\DeclareAcronym{<id>){<short>}{<long>}{<extra>}
```

These information will only be displayed in the list. See section 5 for the impact of the following example.

```
1 % preamble:
2 % \DeclareAcronym{nato}{\nato}{\North Atlantic Treaty Organization}{\textit{
    deutsch}: Organisation des Nordatlantikvertrags}
3 % \DeclareAcronymFormat{\nato}{\scshape}
4 The \ac{\nato} is an intergovernmental military alliance based on the
5 North Atlantic Treaty which was signed on 4~April 1949. \ac{\nato}
6 headquarters are in Brussels, Belgium, one of the 28 member states
7 across North America and Europe, the newest of which, Albania and
8 Croatia, joined in April 2009.
```

The North Atlantic Treaty Organization (NATO) is an intergovernmental military alliance based on the North Atlantic Treaty which was signed on 4 April 1949. NATO headquarters are in Brussels, Belgium, one of the 28 member states across North America and Europe, the newest of which, Albania and Croatia, joined in April 2009.

4. Additional Commands and Possibilities

4.1. Using Classes

The acronyms of ACRO can be divided into different classes. This doesn't change the output but allows different acronym lists, see section 5. For this \DeclareAcronym has an optional argument:

\DeclareAcronym{<id>){<short>}{<long>}[<class>]

This might be useful if you can and want to divide your acronyms into different types, technical and grammatical ones, say, that shall be listed in different lists.

4.2. Reset or Mark as Used

If you want for some reason to fool ACRO into thinking that an acronym is used for the first time you can call one of these commands:

Introduced in version 0.5

\acreset{<comma separated list of ids>}

\acresetall

```
\acreset{ny}\ac{ny}\ New York (NY) [Wik12b]
```

Beware that both commands act *globally*! There is also one command that effectively is the opposite of \acreset, i.e., it marks an acronym as used:

Introduced in version 0.5 Introduced in version 0.6a \acuse{<comma separated list of ids>}

\acuseall

4.3. Labels

The first usage of an acronym sets a label \label{ac:<id>}, regardless which command has been used to typeset it. This label is used to create the page numbers in the list (see section 5 for details) but can also be used for other references if needed.

4.4. \ac and Friends in PDF Bookmarks

Introduced in version 0.5

ACRO's commands usually are not expandable which means they'd leave unallowed tokens in PDF bookmarks. hyperref¹⁵ offers \texorpdfstring to circumvent that issue manually but that isn't really a nice solution. What's the point of having macros to get output for you if you have to specify it manually after all?

That is why ACRO offers a preliminary solution for this. In a bookmark every \ac like command falls back to a simple text string typesetting what \acs would do (or \acsp for plural forms). These text strings both can accessed manually and can be modified to an output reserved for PDF bookmarks.

¹⁵ CTAN: hyperref

 $\acpdfstring{<id>} \rightarrow access the text string used in PDF bookmarks.$

 $\acpdfstringplural{<id>}$ \rightarrow access the plural form of the text string used in PDF bookmarks.

For example the PDF acronym used in the title for this section is defined as follows:

```
    \DeclareAcronym{pdf}{pdf}{Portable Document File}
    \DeclareAcronymFormat{pdf}{\scshape}
    \DeclareAcronymPDFString{pdf}{PDF}
```

5. Printing the List

Printing the whole list of acronyms is easy: just place \printacronyms wherever you want the list to be.

\printacronyms{<list of classes>}[<excluded classes>] → the first optional (!) argument {<list of classes>} takes a comma-separated list of the classes of acronyms that should be in the list. If the argument is left out, all acronyms are printed. In the optional argument [<excluded classes>] classes can be specified that shall not be included into the list.

```
\acsetup{hyperref=false,extra-style=comma}

\printacronyms[city]
\acsetup{list-name=City Acronyms}
\printacronyms{city}
```

Acronyms

co Compact Disc

ID identification string

JPEG Joint Photographic Experts Group

MP Member of Parliament

NATO North Atlantic Treaty Organization, deutsch: Organisation des Nordatlantikvertrags

PDF Portable Document Format

SW Sammelwerk

ST Some Test

City

Acronyms

LA Los Angeles

NY New York

You can see that the default layout is a description list with a section* title. Both can be changed, see section 6.

The command \printacronyms needs two LaTeX runs. This is a precaution to avoid error messages with a possibly empty list. But since almost all documents need at least two runs and often are compiled much more often than that, this fact shouldn't cause too much inconvenience.

6. Customization

6.1. General Options

There are a few options which change the general behaviour of ACRO. <u>Underlined</u> values are used if no value is given.

single = true|false

Default: false

If set to true an acronym that's used only once '(with \ac) in a document will only print the long form and will not be printed in the list.

hyperref = true|false

Default: false

If set to true the short forms of the acronyms will be linked to their list entry.

only-used = true|false

Default: true

This option is true as default. It means that only acronyms that are actually used in the document are printed in the list. If false, all acronyms defined with \DeclareAcronym will be written to the list.

macros = true|false

If set to true this option will create a macro \<id>for each acronym as a shortcut for \ac{<id>}. Already existing macros will *not* be overwritten.

xspace = true|false

Introduced in version o.6

Default: false

Default: false

If set to true this option will append \xspace from the xspace ¹⁶ package to the commands created with the macros option.

strict = true|false

Default: false

If set to true and the option macros = true is in effect then already existing macros will be overwritten.

sort = true|false

Default: false

If set to true the acronym list will be sorted automatically. The entries are sorted by their ID ignoring upper and lower case. This option needs the experimental package l3sort (from the l3experimental to bundle) and can only be set in the preamble.

cite = all|first|none

Default: first

This option decides whether citations that are added vie \DeclareAcronymCitation are added to each first, every or no appearance of an acronym.

cite-cmd = <cmd>

Default: \cite

This option determines which command is used for the citation. Each citation command that takes the cite key as argument is valid, for example biblatex's¹⁸ \footcite.

cite-space = <code>

Default: \nobreakspace

Depending on the citation command in use a space should be inserted before the citation or maybe not (e.g. \footcite...). This option allows you to set this. Actually it can be used to place arbitrary code right before the citation.

uc-cmd = < cmd >

Default: \acro_first_upper_case:n

The command that is used to capitalize the first word in the \Ac and the like commands. You can change it to another one like for example \makefirstuc¹⁹ or \MakeTextUppercase.²⁰

All options of this and the following sections can be set up either as package options or via the setup command:

\acsetup{<options>} set up ACRO anywhere in the document. Or separate package loading from setup.

```
with \acsetup{macros}
we could have used these before: \nato, \ny
we could have used these before: NATO, NY
```

¹⁶ CTAN: xspace ¹⁷ CTAN: l3experimental ¹⁸ CTAN: biblatex ¹⁹ from the mfirstuc package ²⁰ from the textcase package

6.2. Options Regarding Acronyms

The options described in this section all influence the layout of one of the possible output forms of the acronyms.

```
short-format = <format>
```

(initially empty)

Sets a format for all short forms. For example short-format = \scshape would print all short forms in small caps.

long-format = <format>

(initially empty)

The same for the long forms.

list-long-format = <format>

(initially empty)

An extra format for the long entries in the list. If not used this is the same as long-format.

extra-format = <format>

(initially empty)

The same for the extra information.

 $\label{eq:first-style} \textbf{first-style} \ = \ default|plain|footnote|square|short|reversed|plain-reversed|}$

Default: default

The basic style of the first appearance of an acronym.

extra-style = default|plain|comma|paren|bracket

Default: default

Defines the way the extra information is printed in the list.

plural-ending = <tokenlist>

Default: s

With this option the default plural ending can be set.

```
% (Keep in mind that we're in
% a minipage here!)
3 \acsetup{first-style=footnote}
                                                NY a
4 \acf{ny} \\
                                                New York [NY] [Wik12b]
5 \acsetup{first-style=square}
                                                NY [Wik12b]
6 \acf{ny} \\
7 \acsetup{first-style=short}
                                                NY (New York) [Wik12b]
                                                New York - NY [Wik12b]
  \acf{ny} \\
9 \acsetup{first-style=reversed}
                                                NY - New York [Wik12b]
10 \acf{ny} \\
                                                <sup>a</sup> New York [Wik12b]
\acsetup{first-style=plain}
12 \acf{ny} \\
\acsetup{first-style=plain-reversed}
_{14} \setminus acf\{ny\}
```

6.3. Options Regarding the List

page-ref = none|plain|comma|paren

Default: none

The style with which the page number of the first appearance of the acronym in the text is displayed.

```
page-name = <page name>
  The "name" of the page label.
```

Default: p.

Default: Acronyms

Default: false

list-type = table|<list>

Default: description This option let's you choose how the list is printed. t> can be any valid list like itemize or description.

list-style = list|tabular|longtable|extra-tabular|extra-longtable| extra-tabular-rev|extra-longtable-rev Default: list If you choose list-type = table you have to specify which kind of table should be used. If you

choose longtable, extra-longtable or extra-longtable-rev you have to load longtable 21 in your preamble. The values extra-longtable and extra-longtable-rev put the extra information in a column of its own.

list-header = chapter|chapter*|section|section*|subsection|subsection* The header type of the list. Default: section*

```
list-name = <list name>
```

The name of the list. This is what's written in the list-header.

Default: .7\linewidth list-table-width

This has only an effect if you chose list-type = table. The second column (or the third if you choose one of the -rev styles) of the table is a p column whose width can be specified with this option.

list-caps = true|false

Print the first letters of the long form capitalized.

If you for example have loaded enumitem²² you can define a custom list for the acronym list:

```
1 % preamble:
2 % \usepackage{enumitem}
3 \newlist{acronyms}{description}{1}
4 \newcommand*\addcolon[1]{#1:}
5 \setlist[acronyms]{labelwidth=3em,leftmargin=3.5em,noitemsep,itemindent=0
     pt, font=\addcolon}
6 \acsetup{list-type=acronyms, hyperref=false, extra-style=comma}
7 \printacronyms
```

²¹ CTAN: longtable ²² CTAN: enumitem

Acronyms

CD: Compact Disc identification string

JPEG: Joint Photographic Experts Group

LA: Los Angeles

MP: Member of Parliament

NATO: North Atlantic Treaty Organization, deutsch: Organisation des Nordatlantikvertrags

NY: New York

PDF: Portable Document Format

SW: SammelwerkST: Some Test

hyperref Support

The option hyperref = true adds internal links from all short (or alternative) forms to their respective list entries. Of course this only works if you have loaded the hyperref package in your preamble. You should use this option with care: if you don't use \printacronyms anywhere this option will result in loads of hyperref warnings. Also printing several lists can result in warnings if don't clearly separate the lists into different classes. If an acronym appears in more than one list there will also be more than one hypertarget for this acronym.

A. All Acronyms Used in this Documentation

```
list-type = table,
list-style = longtable,
list-header = subsection*,
extra-style = comma,
page-ref = comma,
list-name = All Acronyms}
printacronyms
```

All Acronyms

CD Compact Disc, p. 5
ID identification string, p. 3

JPEG Joint Photographic Experts Group, p. 6

LA Los Angeles, p. 7

MP Member of Parliament, p. 5

```
    NATO North Atlantic Treaty Organization, deutsch: Organisation des Nordatlantikvertrags, p. 6
    NY New York, p. 3
    PDF Portable Document Format, p. 7
    SW Sammelwerk, p. 5
    ST Some Test, p. 3
```

```
list-type = table,
list-style = longtable,
list-header = subsection*,
page-ref = comma,
list-name = City-Acronyms}
printacronyms{city}
```

City-Acronyms

```
LA Los Angeles, p. 7
NY New York, p. 3
```

References

- [Oet10] Tobias Oetiker. acronym An Acronym Environment for Lag. Version 1.36, Sept. 8, 2010. URL: http://www.ctan.org/pkg/acronym.
- [Swio1] Matt Swift. abbrevs. Version 1.4, Sept. 8, 2001. URL: http://www.ctan.org/pkg/abbrevs.
- [Tal11] Nicola L.C. Talbot. glossaries. Version 3.01, Apr. 12, 2011. URL: http://www.ctan.org/pkg/glossaries.
- [Tho95] Paul A. Thompson. acromake. Version na, July 16, 1995. URL: http://www.ctan.org/pkg/acromake.
- [Vey+o5] Boris Veytsman, Bernd Schandl, Lee Netherton, and C.V. Radhakrishnan. nomencl
 A Package to Create a Nomenclature. Version 4.2, Sept. 22, 2005. URL: http://www.ctan.org/pkg/nomencl.
- [Vos10] Jakob Voss. acroterm. Version o.1, Nov. 19, 2010. URL: http://www.ctan.org/pkg/acroterm.
- [Wiki2a] Wikipedia. *Acronym and initialism.* 2012. URL: http://en.wikipedia.org/wiki/Acronyms (visited on 06/21/2012).

[Wik12b] Wikipedia. New York City. 2012. URL: http://en.wikipedia.org/wiki/New_York_City (visited on 09/27/2012).

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