

The `abbrev` package*

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Abstract

This package provides macros for typesetting abbreviations. It was developed at the Swiss Federal Institute of Technology Zurich (ETH-Zurich).

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1 Introduction

This package was developed in order to ease the typesetting of abbreviations in \LaTeX . Each abbreviation is associated with a set of macros for typesetting. Abbreviations are collected and can be displayed in list of abbreviations by making use of package `nomenc1`.

2 Usage

Just like any other package, you need to request this package with a `\usepackage` command in the preamble.

So in the simpler case, one just types

`\usepackage{abbrev}`

to load the package

The rest of this section is to give descriptions of the main (meta-)macro for creating abbreviation macros and their expected behaviour.

`\newabbrev` Macro `\newabbrev` is a meta-macro that creating several abbreviation macros. The signature of `\newabbrev` is as follows.

`\newabbrev[\langle csname \rangle]{\langle abbreviation \rangle}{\langle full string \rangle}`

*This document corresponds to `abbrev` v1.0, dated 2013/04/22.

The first optional argument is the *control sequence* name that will be use to create abbreviation macros. If the first optional argument is undefined, the second argument representing the *abbreviation* will be used as the control sequence. The third argument is the *full expansion string* of for the abbreviation.

An invocation of the above `\newabbrev` with control sequence `csname` will create the following macros:

- `\csname`: Singular version of the abbreviation macro.
- `\csnames`: Plural version of the abbreviation macro.

First time usage of `\csname` will be replaced by “full string (abbreviation)”. Subsequent uses of `\csname` will be replaced by “abbreviation”. Macro `\csnams` is the plural version (with *s* after the “full string” and the “abbreviation” accordingly).

`\resetabbrev` The above expansion behaviour can be reset by calling `\resetabbrev`. Afterwards, `\csname` and `\csnames` will be expanded the first time that they are used.

More information can be found in the accompanying sample document.

2.1 Creating a List of Abbreviations

The list of abbreviations can be created by making use of package `nomenc1`. Typically, one includes the following in the document preamble.

```
\usepackage{nomenc1}
\renewcommand{\nomname}{List of Abbreviations}
\makenomenclature
```

The following command from `nomenc1` is used print the list of abbreviations.

```
\printnomenclature
```

Finally, use `makeindex` to compile and generate the list of abbreviations appropriately.

```
makeindex filename.nlo -s nomenc1.list -o filename.nls
```

where `filename` is the name of the main `.tex` file.

3 Implementation

The implementation is quite straightforward. We first request the `etoolbox` package for implementation purpose, `xspace` for utilising the spacing, and `nomenc1` for creating list of abbreviations.

```
\RequirePackage{etoolbox}
\RequirePackage{xspace}
\RequirePackage{nomenc1}
```

`\newabbrev` The `newabbrev` makes use of the worker macro `abbrev@create` for creating abbreviations macros.

```
\newcommand{\newabbrev}[3][{}]{%
\expandafter\ifstrequal\expandafter{#1}{%
\abbrev@create{#2}{#2}{#3}
}{
\abbrev@create{#1}{#2}{#3}
```

```

    }
}

```

\abbrev@create The main worker meta-macro for creating the abbreviation macros is implemented as follows. It create a private toggle variable to be used to distinguish the first time usage of the abbreviation. The abbreviation is add to **abbrev@list** (for resetting abbreviation macros later). It then call **abbrev@init** to create the initialisation macro, then call the initialisation macro afterward.

```

\newcommand{\abbrev@create}[3]{%
  \newtoggle{#1@toggle}
  \listadd{\abbrev@list}{#1}
  \abbrev@init{#1}{#2}{#3}
  \csuse{#1@init}
}

```

\abbrev@init This macro create the initialisation meta-macro for creating the abbreviation macros.

```

\newcommand{\abbrev@init}[3]{%
  \expandafter\def\csname#1@init\endcsname{%
    \togglefalse{#1@toggle}
    \expandafter\def\csname#1\endcsname{%
      \iftoggle{#1@toggle}{%
        #2%
      }{%
        \nomenclature{#2}{#3}%
        \toggletrue{#1@toggle}%
        #3 (#2)%
      }%
      \expandafter\def\csname#1\endcsname{#2\xspace}%
      \xspace%
    }

    \expandafter\def\csname#1s\endcsname{%
      \iftoggle{#1@toggle}{%
        #2s%
      }{%
        \nomenclature{#2}{#3}%
        \toggletrue{#1@toggle}%
        #3s (#2s)%
      }%
      \expandafter\def\csname#1s\endcsname{#2s\xspace}%
      \xspace%
    }%
  }%
}

```

\resetabbrev Reset the all abbreviation macros to full expansion mode by going through **abbrev@list** and call the initialisation macro for each abbreviation.

```

\newcommand{\resetabbrev}{
  \renewcommand*{\do}[1]{
    \csuse{##1@init}
  }
}

```

```

    }
    \dolistloop{\abbrev@list}
  }

```

Change History

v1.0 `\newabbrev`: Macro created 2
 General: Initial version 1

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