The abbrev package*

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April 22, 2013

Abstract

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

Contents

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 `nomencl`.

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[`⟨*csname*⟩`]{`⟨*abbreviation*⟩`}{`⟨*full string*⟩`}`

*This document corresponds to abbrev ?, dated ?.

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 `nomencl`. Typically, one includes the following in the document preamble.

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

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

```
\printnomenclature
```

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

```
makeindex filename.nlo  -s nomencl.ist -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 `nomencl` for creating list of abbreviations.

```
\RequirePackage{etoolbox}
\RequirePackage{xspace}
\RequirePackage{nomencl}
```

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

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

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