

A Package to Subnumber L^AT_EX Counters

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This paper describes package `sublabel`

version 4.5 from 1999/02/23

*It is part of the **preprint** collection of packages*

Summary

The stripped version of this file contains the following brief description:

```
% To change a counter foo so that it has sublabels (4a 4b 4c ...)
% give the command \sublabon{foo}... \sublaboff{foo}
%
% The style of the sublabel is given by command \substyle, which takes one
% argument, a counter. It may be redefined in the document to be whatever
% style is wanted.
<209> % Default is {\it\alph{#1}}, ie italic lowercase numbers.
<*/209>
% Default is {\itshape\alph{#1}}, ie italic lowercase numbers.
%
% Options for LaTeX2e:
%   roman   the style of sublabels is small roman letter
%   italic  the style is small italic letter (default)
</!209>
```

1 Introduction

The macros in this package allow all counters to be subnumbered, as for example *4a*, *4b*, *4c*, simply by bracketting the objects to be so numbered with appropriate on/off commands. These commands specify which counters are to be subnumbered, and they are of global effect. This means that they will work with any user-defined counters too, and that their effect goes beyond any current environment.

2 Invoking the Package

The macros in this package are included in the main document with the `\usepackage` command of L^AT_EX 2_ε,

```
\documentclass[...]{...}
\usepackage[options]{sublabel}
```

where the possible *options* are:

italic to have subnumbers as italic lowercase letters (default);

roman to have the subnumbers as Roman lowercase letters, as 4a.

Alternatively, the name of the package is added as an option to the `\documentstyle` command in L^AT_EX 2.09 compatibility mode, as

```
\documentstyle[.sublabel...]{...}
```

In this case, no options are possible.

3 Usage

`\sublabon` In order to number equations, figures, plates, and tables automatically with subnumbers (e.g. 4a, 4b, 4c) use the commands `\sublabon` and `\sublaboff`. These commands take as argument the name of the counter that is to be subnumbered, i.e. `equation`, `figure`, or `table`. The on and off versions bracket the objects that are to be labelled with the same number but different letters. For example,

```
\sublabon{figure}
\begin{figure}
  \caption{Text of Fig. 4a}
\end{figure}
\begin{figure}
  \caption{Text of Fig. 4b}
\end{figure}
\sublaboff{figure}
```

These commands also work for the `equation` environment in the same way. For the `eqnarray` environment, some care must be taken. The `\sublabon` command is to be given *in* the first equation to be bracketed, before the `\label` and `\%` commands, while the `\sublaboff` command is given after the `\%` of the last equation in the group. If necessary, it must come after `\end{eqnarray}`.

```
\begin{eqnarray}
  x & = & a \label{eq:x}\%--> 1
  \sublabon{equation}
  y & = & b \label{eq:y}\%--> 2a
  z & = & c \label{eq:z}\%--> 2b
  \sublaboff{equation}
  w & = & d \label{eq:w} \%--> 3
\end{eqnarray}
```

If two groups appear adjacently, it is only necessary to give `\sublabon` between them.

`\substyle`

The style in which the sublabels are written is determined by a command `\substyle`. Its default definition is as italic lowercase letters.¹ If one wishes, this may be changed in the document itself. It must take an argument that is a counter. For example, to change the style of sublabels to be as 5–A, 5–B, 5–C, give

```
\renewcommand{\substyle}[1]{--\Alph{#1}}
```

4 Interference with Other Options

If both `sublabel` and `figcaps` packages are to be used together, then `sublabel` must be input first. This is because `figcaps` makes modifications so that the sublabelling also works on the page of figure captions.

Other packages (like `amsmath`) also modify some of the commands re-defined here. As of version 4.4, the redefinitions are delayed until after all packages are loaded, so that this conflict is avoided. For earlier versions, things went wrong if `amsmath` were loaded after `filename`.

¹In $\text{\LaTeX} 2\epsilon$, if the option `roman` is added to the `\usepackage` command, then the default is upright lowercase letters.