

The **rendition** Package  
Creating multiple renditions (versions)  
from the same source file

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<small><sup>1</sup> <code>\*package</code></small>	

## 1 The renditions Package

This is a short package sets up comment environments, called *renditions*. These renditions can be included or excluded according to the value of the `rendition` option. The basic options of this package are `max` and `rendition`

```
\usepackage[max=4,rendition=3]{renditions}
```

In the above example, `max=4` declares that there are 4 renditions in the document, the option `rendition=3` causes the package to include `rendition3`, and to exclude all the others `rendition1`, `rendition2`, and `rendition4`.

The `renditions` package is a stand-alone package, but it was designed for use with the AeB Builder utility.

Below is an example of a document that uses the `renditions` package.

```

\documentclass{article}
\usepackage[%
    max=4,
    rendition=3
]{renditions}

%\rendition{2}

\parindent0pt\parskip6pt

\begin{document}
This is a test file for
renditions.

\begin{rendition1}
Rendition 1
\end{rendition1}

\begin{rendition2}
Rendition 2
\end{rendition2}

\begin{rendition3}
Rendition 3
\end{rendition3}

\begin{rendition4}
Rendition 4
\end{rendition4}

\end{document}

```

There are two options for the `renditions` package: `max` and `rendition`. The value of `max` sets the maximum number of renditions in the document; the value of the `rendition` key determines which of the renditions is to be typeset. You can also select the rendition using the `\rendition` command, as illustrated to the left. (The `\rendition` command in the preamble would override the value of the `rendition` key.)

The various renditions are defined with the `rendition<n>` environment. These environments are just comment environments created by the `comments` package, and they are selectively included or excluded depending on the value of the rendition defined by either the `rendition` key or the `\rendition` command.

The `rendition` package does modular arithmetic in the case when `rendition > max`. For example, if `max=4`, and `rendition=6`, then the rendition displayed is `rendition=2`.

There is a third way of setting the value of the rendition parameter, and that is through the `rendition.cfg` file. If you create a file with the code

```
\ExecuteOptionsX{rendition=3}
```

Then `rendition=3` is used.

**Default values.** The default value of `max`, if it is not specified is 3, and the default value of `rendition` if it is not specified is 1.

There should not be a `rendition<n>` environment with a number, `<n>`, greater than that specified by `max`; however, if the value of `rendition` is greater than `max`, modular arithmetic is performed, and the rendition numbered `rendition Mod max` is used.

**History.** The core of this package was originally developed for my online testing system TAOAS (The AcroT<sub>E</sub>X Online Assessment System). In that system, the `rendition.cfg` approach was used to select a rendition to be used.

## 2 The Main Code

We use `xkeyval` to create the two options `max` and `rendition`.

```
2 \RequirePackage{xkeyval}
```

`max` The maximum number of renditions present in this file. The value of `max` must be a positive integer, no checking takes place. The default number is 3.

`rendition` The number of the rendition what you want to use for this run of the latex compiler. The default number is 1.

```
3 \DeclareOptionX{max}{\def\ren@numberOf{#1}}
4 \def\ren@numberOf{3}
5 \DeclareOptionX{rendition}{\def\thisrendition{#1}}
6 \def\thisrendition{1}
```

Input the configuration file, if it exists. This file normally contains the line of L<sup>A</sup>T<sub>E</sub>X code `\ExecuteOptions{rendition=<n>}`

```
7 \InputIfFileExists{rendition.cfg}{}{}
```

Process the options.

```
8 \ProcessOptionsX
```

The comment package is required.

```
9 \RequirePackage{comment}
```

Based on the value of `max`, we create the requested number of rendition environments: `rendition1`, `rendition2`, ..., `rendition<max>`.

```
10 \let\save@message\message\let\message@gobble
11 \@tempcnta=0
12 \@whilenum\@tempcnta<\ren@numberOf\do{%
13   \@tempcntb=\@tempcnta\advance\@tempcntb1
14   \edef\temp@exp{\noexpand\excludecomment{rendition\the\@tempcntb}}%
15   \temp@exp
16   \expandafter\let\csname Afterver\the\@tempcntb Comment\endcsname\relax
17   \advance\@tempcnta1
18 } \let\message\save@message
```

We include the selected version at the beginning of the document.

```
19 \AtBeginDocument{\includecomment{rendition\thisrendition}}
```

`\rendition` A convenience macro for setting the current renditions. This command defines the command `\thisrendition`, which expands to the selected rendition number. If the value of `\thisrendition` is greater than `max` (`\ren@numberOf`), modular arithmetic is performed, and `\thisrendition` is redefined.

```
20 \def\rendition#1{\def\thisrendition{#1}}%
21   \ifnum\thisrendition>\ren@numberOf
22     \@tempcnta=\thisrendition
23     \@tempcntb=\@tempcnta
24     \advance\@tempcnta-1 \divide\@tempcnta\ren@numberOf
25     \multiply\@tempcnta\ren@numberOf
```

```
26         \advance\@tempcntb-\@tempcnta
27         \edef\thisrendition{\the\@tempcntb}%
28         \typeout{Modular arithmetic applied: ren=\thisrendition}%
29     \fi
30 }
31 \@onlypreamble{\rendition}
We execute \rendition for the selected rendition.
32 \expandafter\rendition\expandafter{\thisrendition}
33 </package>
```