

# The ifmtarg package

Author: Donald Arseneau, and Peter Wilson, Herries Press

Maintainer: Will Robertson

will dot robertson at latex-project dot org

v1.2b 2018/04/16

## 1 Documentation

The ifmtarg package provides an if-then-else programmer's command `\ifmtarg` for testing for an empty macro argument. 'Empty' here refers to an argument of zero or more spaces only.<sup>1</sup> The command is fully expandable; its syntax is:

```
\ifmtarg{<arg>}{<Code for arg empty>}
               {<Code for arg not empty>}
```

A variation is provided, `\ifnotmtarg`, to be used when only the 'false' branch is required. It is slightly more efficient when code is only required for a non-empty argument.

```
\ifnotmtarg{<arg>}{<Code for not empty>}
```

## 2 Examples

```
\newcommand\isempty[1]{\ifmtarg{#1}{YES}{NO}}
```

```
\isempty{}      → YES
\isempty{ }     → YES
\isempty{E}     → NO
\isempty{ E }   → NO
```

```
\newcommand\isnotempty[1]{\ifnotmtarg{#1}{YES}}
```

```
\isnotempty{}   →
\isnotempty{ }  →
\isnotempty{E}  → YES
\isnotempty{ E } → YES
```

## 3 History

(*Peter's comments follow.*) In an Email to me on 13 March 2000, Donald Arseneau pointed out some failings with my original definition of the `\ifmtarg` command:

```
\newcommand{\ifmtarg}[3]{%
  \edef\@mtarg{\zap@space#1 \@empty}%
  \ifx\@empty\@mtarg\relax #2\else #3\fi}
```

It works most of the time correctly but Donald showed that it can give unexpected results under conditions that I had not thought of. He suggested the coding that now appears in the package above for the `\ifmtarg` and `\ifnotmtarg` commands. For a discussion on detecting empty arguments see [CTAN/info/answer.002](http://www.ctan.org/info/answers/answer.002)

## Change History

v1.2a New maintainer (Will Robertson)

v1.2b Typo in documentation example code

## Licence and copyright

This work may be modified and/or distributed under the terms and conditions of the L<sup>A</sup>T<sub>E</sub>X Project Public License<sup>2</sup>, version 1.3c or later (your choice). The current maintainer of this work is Will Robertson.

Copyright Peter Wilson, 1996

Copyright Peter Wilson and Donald Arseneau, 2000

<sup>1</sup>If you need a command to test for emptiness that doesn't include spaces, use the `\tl_if_empty:nTF` conditional from the `expl3` package. `\ifmtarg` is equivalent to `expl3's \tl_if_blank:nTF`.

<sup>2</sup><http://www.latex-project.org/lppl.txt>

## 4 *Implementation*

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{ifmtarg}[2018/04/16 v1.2b check for an empty argument]
\begingroup
\catcode'\Q=3
\long\gdef\@ifmtarg#1{\@xifmtarg#1QQ\@secondoftwo\@firstoftwo\@nil}
\long\gdef\@xifmtarg#1#2Q#3#4#5\@nil{#4}
\long\gdef\@ifnotmtarg#1{\@xifmtarg#1QQ\@firstofone\@gobble\@nil}
\endgroup
\endinput
```