

# Documentation of the LE2I-UTBM Theme for Beamer

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■ This document explains the LATEX macros that are provided by the LE2I-UTBM theme for beamer.

- To use the LE2I-UTBM theme for beamer, you must:
  - Install the files of the LE2I-UTBM theme inside your LATEX distribution.
  - Create a document, which uses the document class: le2iutbmbeamer



- Provide a presentation style related to the research group of the LE2I located at the UTBM.
- Add a title slide (with label titleslide for \hyperlink) as the first slide.
- Add a final slide at the end of the presentation to avoid "black" screen at the end of the presentation.
- Provide high level macros for building the slides.



It is recommended to read the user guide of Beamer for obtain a view of the available macros.

http://texdoc.net/
texmf-dist/doc/latex/beamer/
doc/beameruserguide.pdf



# Outline

- 1 Predefined Values
- 2 Class Options and Document Declaration
- 3 Header and Footer Tuning
- 4 Sectionning
- 5 Special Slides
- 6 Slide Content
- 7 Low-level Macros





- 1 Predefined Values
  - Colors



- The LE2I-UTBM theme defines the official colors:
  - LE2IUTBMblue : | Example | Example
    - LE2IUTBMmagenta : | Example | Example
  - LE2IUTBMgreen : | Example | Example
  - LE2IUTBMlightblue : | Example | Example
  - Example LE2IUTBMlightestblue:
  - LE2IUTBMlightmagenta: | Example | Example
  - LE2IUTBMlightestmagenta: Example
  - LE2IUTBMdarkgray : | Example | Example

# Outline

- 2 Class Options and Document Declaration
  - Class Options
  - Title and Subtitle
  - Authors
  - Keywords, Subject and Abstract
  - Name of the Event.
  - Name and URL of the Institute





The document class le2iutbmbeamer supports the following options.

# Presentation language

- english: the slides are written in English (this is the default).
- french: the slides are written in French.

#### Automatic slides

- nocover: do not add a slide for the title and the "thanks".
- thanksslide: add a slide with the word "Thanks" at the end (this is the default).
- questionslide: add a slide with the word "Question" at the end.
- repeattitleslide: add the title slide at the end.





# Slide numbering

- textnumberstyle: the frame numbers are output as text. ▶ See example
- circlenumberstyle: the frame numbers are output in a circle. ▶ See example
- sectioncirclenumberstyle: the frame numbers are output in a circle. ▶ See example
- partcirclenumberstyle: similar to circlenumberstyle except that the indicator is reset at the start of each part.
- partsectioncirclenumberstyle: similar to sectioncirclenumberstyle except that the indicator is reset at the start of each part.
- nonumberstyle: the frame numbers are not output.





#### **Footline**

lablogo and nolablogo: enable or disable the laboratory logos in the foot line.

# Event name in specific locations

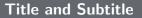
- eventintitlebar: on the title slide, the event's name should be put in the title bar.
- eventbelowauthors: on the title slide, the event's name should be put below the authors.

# **Hyphenation**

hyphenation and nohyphenation: enable or disable the hyphenation of the text on the slides.

All the options accepted by Beamer are also accepted.







## Title

Use the macro: \title{title of the document}

#### Subtitle

Use the macro: \subtitle{subtitle of the document}

These macros must be put in the preamble of your document.



- Authors are defined with the macro: \author[short]{long}
  - the long list of authors is displayed on the front page. You should separate the names with the macro \and.
  - the short list of authors is displayed inside the foot line of the slides. You must not separate the names with the macro \and.
- Alternatively, you could define the authors with the macros:  $\addauthor[short]{long}$ \addauthor\*[short]{long}
  - Add one author to the list of the authors.
  - The "starred" version applies some visual indicators to the name (underline, etc.) It may be used to indicate the name of the talker for example.

These macros must be put in the preamble of your document.



- You could associate keywords to the document with: \keywords{text}
- These keywords are automatically put in the properties of the generated PDF file.
- To insert the keywords into your slides, you could use the macro:

\insertkeywords

# **Example**

Beamer; Theme; LE2I; UTBM; Documentation







- You could associate a subject to the document with: \subject{text}
- This subject is automatically put in the properties of the generated PDF file.
- To insert the subject into your slides, you could use the macro: \insertsubject

# **Example**

Beamer Theme for LE2I Laboratory at UTBM





You could put a short summary of the document in the following environment: \begin{abstract} This is a summary. \end{abstract}

### **Abstract**

This is a summary.

If you include an abstract, be sure that it is not some long text but just a very short message.

## Definition of the event name

- You could specify the name of the event for which the slides are written:
  - \event[short]{full}
- the full name is displayed on the front page.
- the short name is displayed inside the foot line of the slides.
- Put these macros into the document preamble.

## Insert the event name in your slides

- You could insert the full name of the event with:
  - \inserteventname
- You could insert the short name of the event with:
  - \insertshorteventname



- You could change the name of the institute with the following macro in the document preamble: \institute[short]{full}
- the full name is displayed on the front page.
- the short name is displayed inside the foot line of the slides.
- The default full name is: Université de Bourgogne Franche-Comté - UTBM - LE2I, 90010 Belfort cedex, France - http://le2i.cnrs.fr
- The default short name is: LE2I-UTBM.



- You could change the URL of the institute with: \instituteurl{url}
- The default url is: http://le2i.cnrs.fr
- To insert the institute's URL, you could use the macro: \insertinstituteurl



- 1 Predefined Value
- 2 Class Options and Document Declaration
- 3 Header and Footer Tuning
  - Headline
  - Footline
  - Partner Logo
  - Frame Numbering
  - Continuation Text
- 4 Sectionning
- 5 Special Slides
- 6 Slide Content



■ LE2I-UTBM theme provides an headline in which you can change the logo.

- You could change this headline with:
  - \useheaderempty: the headline is empty (no icon).
  - \useheaderdefault: the headline is filled with the default value (may be changed with one of the macros on the following slide).



■ \useheaderempty

XyZ		



\useheaderlinewithmaglogo: the default headline contains the Multiagent Group logo.

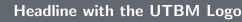
<b>I</b> XyZ	
	Line utter (





\useheaderlinewithleiilogo: the default headline contains the LE2I logo.

르 XyZ		
		<b>∠</b> j≥ utbr



■ \useheaderlinewithutbmlogo: the default headline contains the UTBM logo.





\useheaderlinewithcnrslogo: the default headline contains the CNRS logo.

ors	XyZ	



\useheaderlinewithuserlogo{filename}: the default headline contains the given image.

<b>⊠</b> XyZ	



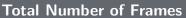
Beamer provides an footline in which the progress of the presentation may be shown. In the LE2I-UTBM theme, this footline is located at the bottom left of the slides.

- You could change this footline with:
  - \usefootlinewithdocumentname: the footline contains the title of the presentation, and other document informations.
  - \usefootlinewithsections: the footline contains the list of the sections of the presentation.



- You could add on all slides one or more logos for your partner(s):
  - \partnerlogo[options]{filename}
- You must call the previous macro for each partner logo.
- The filename is the name of the picture.
- This figure is declared with \pgfdeclareimage with the key "LE2IUTBMpartnerlogo".
- The figure could be re-used with \pgfuseimage.
- The options are passed to \pgfdeclareimage. The default option is height=.5cm.
- For removing all the partner logos, use: \nopartnerllogo.





■ The total number of slides in the core part of the presentation could be obtained with:

\inserttotalcoreframenumber

- The following macro changes the style of the frame numbers:
  - \insertframenumbering[type number]
  - The type number is the identifier of the progress bar to be used:

Type number	Output	Explanation
1	31	Show the current frame and its position (in blue) in the total number of frames.
2	31/83	Show the current frame and the total number of frames.
3	31	Same as the type 1 with a progression bar for the current section (in magenta).

- When continuing a frame, Beamer insert the "continuation text" after the title.
- To insert the continuation text manually, you should use one of: \insertcontinuationtext \insertcontinuationwith{integer}
- The parameter is the value of the continuation counter to display.
- **Example:** in the following frame, the macro is used in the title \insertcontinuationtext.
- **Example:** in the second following frame, the macro is used in the title \insertcontinuationwith{34}.



macro \insertcontinuationtext.

The continuation text in the title of this frame is given by the

The continuation text in the title of this frame is given by the macro \insertcontinuationwith{34}.



- 4 Sectionning
  - Table of Contents
  - Part Sectioning
  - Appendix
  - Bibliography







■ The LE2I-UTBM theme provides a convenient macro to insert a table of contents into a slide: \tableofcontentsslide[options]

```
It is equivalent to:
  \begin{frame}[c]
  \frametitle{\translate{Outline}}
  \tableofcontents[options]
  \end{frame}
```

■ In addition to the standard options for \tableofcontents, the option onlyparts permits to display the list of the parts, only.



■ The LE2I-UTBM theme provides specific implementations of the \part macro:

```
\part[options]{title}
\operatorname{\mathtt{ar{part}*}}[\operatorname{\mathtt{options}}]\{\operatorname{\mathtt{title}}\}
```

- Options may be:
  - a string value that is the "short" title of the part that is appearing in the table of contents.
  - the pair title=text to define the "short" title.
  - the pair author=text to define the author of the part.
  - the pair label=id to define the label of the part.
- The stared version of \part does not add the part in the table of contents.





- By default, each part starts with a slide with only the part's title on, without a prefix such as "Chapter X".
- The LE2I-UTBM theme provides the following macros to change the part's prefix:
  - \insertpartprefix insert the current part prefix.
  - partprefix[counter text] {text} changes the prefix to "text" followed by "counter text".
  - \resetpartprefix resets the prefix to the empty text.

#### **Example**

```
\partprefix[\arabic{part}]{Chapter}
produces: "Chapter 1", "Chapter 2", ...
```



- The LE2I-UTBM theme supports the appendix part.
- To create the appendix, you must:
  - $\blacksquare$  put the macro \appendix in your TEX file; or
  - 2 put the macro \bibliography in your TEX file.
- All the slides that are put after the creation of the appendix are assumed to be part of the appendix.
- The slides in the appendix are not considered in the total number of slides for the core part of the document (see \inserttotalcoreframenumber).
- The slide numbers in the appendix are roman (not arabic), and the page counter is reset at the beginning of the appendix.



- You are able to include a bibliography in your slides with the two standard LATEX macros:
  - \bibliographystyle{style} \bibliography{filename}
- If you do not call \bibliographystyle, the default style is apalike.
- When the macro \bibliography is used, the appendix section is started if it was not already done.
- The bibliography slides are always at the end of the document. Even if you put slides after the \bibliography macro.
- The first slide of the bibliography is marked with the label "bibliographyslide" for \hyperlink.





- 5 Special Slides
  - Slide with a Single Figure
  - Final Slide
  - Book Description



- The LE2I-UTBM theme provides a macro that permits to display a picture on the entire slide: \figureslide[options]{Title of the slide}{file}
- The size of the picture is adjusted to the slide drawing area.
- Example: \figureslide{XyZ}{le2ilogo}



- Options for \figureslide are:
  - width=<length>, specifies the width of the image.
  - height=<length>, specifies the height of the image.
  - scale=<float>, specifies the scaling factor of the image.
  - valign=t|c|b, specifies the vertical alignment of the image (t: top, c: center, b: bottom).
  - halign=1|c|r, specifies the horizontal alignment of the image (1: left, c: center, r: right).
  - label=<text>, specifies the label for the frame.





Predefined Values Class Options and Document Declaration Header and Footer Tuning Sectionning







- The AutoLaTeX<sup>1</sup> tool provides a LATEX package that enables to include images with layers. Each layers may be displayed in a separate frame by Beamer.
- If you have included the AutoLaTeX package, the following macro enables you to display an animated figure on the entire space of a slide:
  - \animatedfigureslide[options]{Title}{file}
- This macro is similar to \figureslide, except that the given picture must be displayable by the macro \includeanimatedfigure, provided by AutoLaTeX.



<sup>1</sup>http://www.arakhne.org/autolatex

#### You must use the AutoLaTeX<sup>2</sup> tool.

- Open your favorite SVG editor (Inkscape, etc.).
- Create the SVG figure with a layer for each frame.
- 3 Put the frame specification into the names of the layers. The frame specification gives the frame numbers for which the SVG layer is displayed. Example: <1-3> indicates the frames 1 to 3. Do not forget to put the lower-than and upper-than symbols.
- 4 Save and run AutoLaTeX. This tool will create a PDF file for each layer, and a TFX file that is controlling the displaying of the figure.
- Include the figure with: \includeanimatedfigure[options]{texfilename}

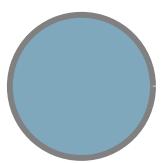


<sup>&</sup>lt;sup>2</sup>http://www.arakhne.org/autolatex



## **Example of ANIMATED Figure**

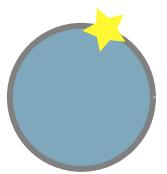
- Three layers are defined with the following names:
  - Layer1 <1-> display the circle in all the frames, starting from the first.
  - Layer2 <2> display the top yellow star in the second frame.
  - Layer3 <3> display the right yellow star in the third frame.





## **Example of ANIMATED Figure**

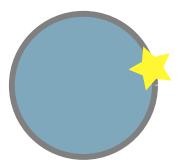
- Three layers are defined with the following names:
  - Layer1 <1-> display the circle in all the frames, starting from the first.
  - Layer2 <2> display the top yellow star in the second frame.
  - Layer3 <3> display the right yellow star in the third frame.





## **Example of ANIMATED Figure**

- Three layers are defined with the following names:
  - Layer1 <1-> display the circle in all the frames, starting from the first.
  - Layer2 <2> display the top yellow star in the second frame.
  - Layer3 <3> display the right yellow star in the third frame.







- The L2EI-UTBM theme automatically adds a slide at the end of the presentation to avoid "black" screen.
- The default text on this slide is: "Thank you for your attention...".
- An other text that is available is: "Questions...".
- The third option is to repeat the title slide.
- The class options thanksslide, questionslide and repeattitleslide permit to select one of these possibilities.
- The macro \finalslidetext{text} may be used to set the text by hand.
- This slide is marked with the label finalslide for \hyperlink.



- You are able to include a description of a book in your presentation with the macro:
  - \libraryslide[options]{picture} {title}{authors}{How published}{ISBN}
- The macro creates a slide for a book.
- The options may be composed of pairs of name-value:
  - frametitle=text: specifies the title of the frame.
  - subtitle=text: specifies the subtitle of the book.
- If a name is not specified in the options, the "subtitle" name is assumed.



### Outline

- 6 Slide Content
  - Drawing
  - Boxes
  - Tables, Descriptions and Lists
  - Text
  - Notes
  - I inks





- 6 Slide Content
  - Drawing
  - Boxes
  - Tables, Descriptions and Lists
  - Text
  - Notes
  - Links





- If you want to put something at an absolute position in your frame, you could use: \putat(x,y){something}
- Caution: The added elements are put less deeper than the slide text.
- For putting the elements more deeper than the slide text, use: \putat\*(x,y){something}
- Example: \putat(100,-20){\color{red}{TESTING}}

#### TESTING





- 6 Slide Content
  - Drawing
  - Boxes
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### The LE2I-UTBM theme defines the a box for alerts:

\alertbox<frame\_spec>{this is an alert text}

#### this is an alert text

\alertbox\*<frame\_spec>{this is an alert text}

#### this is an alert text

Note that <frame\_spec> is optional. It permits to specify the Beamer frame in which the box is displayed.



The LE2I-UTBM theme defines the the following macros to put examples in the text (not in a block, as predefined in Beamer):

- \insertexamplelabel insert the text "example".
- \insertexampleslabel insert the text "examples".
- \inlineexample{text} insert a example in the text. Example: This is a text followed by an inline example. \inlineexample{some text.} This is a text followed by an inline example. Example: some text.
- \inlineexamples{text} insert examples in the text. Example: This is a text followed by inline examples. \inlineexamples{some text.} This is a text followed by inline examples. Examples: some text.

- Beamer provides the macro \framezoom to zoom on a part of a frame. But, it create a new slide and it is difficult to return to the original slide with a single click.
- The LE2I-UTBM theme provides a new macro for zooming on click.
- \zoombox[options]{box content}
  - Display the content of the box. When clicked, display the box content after fitting it to the entire screen. When clicked again, the original slide is restore.
  - options are:
    - border=XXpt: specify the size of the border lines around the box.
    - left=XXpt: specify the size of the left margin.
    - right=XXpt: specify the size of the right margin.
    - top=XXpt: specify the size of the top margin.
    - bottom=XXpt: specify the size of the bottom margin.
    - margin=XXpt: specify the size of all of the margins.





### Caution

The macro \zoombox is working in viewers that are supporting JavaScript (Acrobat Reader...)

#### **700MING EXAMPLE**



- The LE2I-UTBM style provides the macro \adjustbox to add margins to a box.
- \adjustbox[options]{box content}
- The options are:
  - left=XXpt is the size of the left margin.
  - right=XXpt is the size of the right margin.
  - top=XXpt is the size of the top margin.
  - bottom=XXpt is the size of the bottom margin.
  - size=XXpt is the size of all of the margins.





- 6 Slide Content
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- The LE2I-UTBM theme puts colorized borders around tables.
- In addition, you could create a table heading with specific colors:
  - \tabularheading to use the heading background.
  - \chead{text} to define the text of a column heading.

### Example

```
\begin{array}{l} \begin{tabular}{|1|1|}\\ \end{array}
\hline
\hat{B}
\hline
C&D\\
end{tabular}
```





# **Enhanced Description**

The LE2I-UTBM theme provides an enhanced definition of the description environment.

```
ackslash begin \{ 	ext{description} \}
\item text1
\item[Item Name] text2
\item<frame_spec> text1
\item<frame_spec>[Item Name] text2
\end{description}
```

- text1
- Item Name: text2



The LE2I-UTBM theme provides an enhanced definition of the description environment.

```
ackslash begin \{ 	ext{description} \}
\item text1
\item[Item Name] text2
\item<frame_spec> text1
\item<frame_spec>[Item Name] text2
\end{description}
```

- text1
- Item Name: text2
- text1
- Item Name: text2





The LE2I-UTBM theme provides an enhanced definition of the enumerate environment.

```
\begin{enumerate}[counter format]
\item text1
\item[Item Name] text2
\item<frame_spec> text1
\item<frame_spec>[Item Name] text2
\end{enumerate}
```

- 1 text1
- Item Name: text2





The LE2I-UTBM theme provides an enhanced definition of the enumerate environment.

```
\begin{enumerate}[counter format]
\item text1
\item[Item Name] text2
\item<frame_spec> text1
\item<frame_spec>[Item Name] text2
\end{enumerate}
```

- 1 text1
- Item Name: text2
- 3 text1
- 4 Item Name: text2

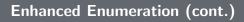




Below, the optional parameter counter format is set to "a)":

- a) text1
- b) Item Name: text2





Below, the optional parameter counter format is set to "a)":

- a) text1
- b) Item Name: text2
- c) text1
- d) Item Name: text2







- For putting a figure on the right side of an itemize environment, the following macros are provided for helping you.
- For putting the figure: \wrapfigure[options]{figure filename}
- For putting items on the side of the figure: \wrapitem[width] { item text}

#### **Example**

- item 1 with \wrapitem.
- item 2 with  $\mbox{\sc wrapitem}$ , item 2 with  $\mbox{\sc wrapitem}$ , item 2 with  $\mbox{\sc wrapitem}$ , item 2 with \wrapitem.



- item 3 with \wrapitem.
- item 4 with \wrapitem.
- item 5 with \item, item 5 with \item, item 5 with \item, item 5 with \item, item 5 with \item.
- item 6 with \item.





- 6 Slide Content
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  - Text
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■ The LE2I-UTBM theme (re)defines the macros for several symbols:

From LE2I-UTBM theme		From T <sub>E</sub> X	
\copyright	©	ackslashcopyright	C
\trademark	TM	ackslashtexttrademark	тм
\servicemark	SM	\textservicemark	SM
\regmark	®	\textregistered	R
\checkmark	✓	\textcheckmark	<b>√</b>
\xmark	X		

The standard Beamer macros for selected the text side are:

```
\TINY, \Tiny, \tiny, \scriptsize, \footnotesize, \small,
\normalsize, \large, \Large, \huge,
```

- The LE2I-UTBM theme includes two additional macros:
  - \smaller : to decrease the size of the text, and
  - \larger : to increase the size of the text.



■ The LE2I-UTBM theme redefines the macro \emph to display the emphazed text with a color. Example: This is an emphased text.

■ The LE2I-UTBM theme defines the macro \Emph to display the "very emphazed" text with a color. Example: This is a "very emphazed" text.







■ The LE2I-UTBM theme redefines the macro \underline to move the line closer to the text.

Before: <u>Example</u>After: <u>Example</u>





- The LE2I-UTBM theme (re)defines the macros to put text in exponent or in indice.
- The macros \textup and \textdown try to add a space after the text, when it is allowed by the typographic rules (it uses the macro \xspace).

From LE2I-UTBM theme		From T <sub>E</sub> X	
\textup	ABC <sup>ABC</sup>	$ackslash  ext{textsuperscript}$	ABC <sup>ABC</sup> D
	D		
\textsubscript	ABC <sub>ABC</sub> D	-	-
\textdown	ABC <sub>ABC</sub>	-	-
	D		



- The LE2I-UTBM theme provides macros to output localized quotes:
  - English: \ukquote{text} Example: "text"
  - French: \frquote{text} Example: « text »
  - Latin: \latquote{text}
  - Example: text
- The following macros are used by the quote macros:
  - \textgravedbl : "
  - \textacutedbl : "
  - \guillemotleft: «
  - \guillemotright: >>



- 6 Slide Content
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- The LE2I-UTBM theme provides two versions of the footnote macro:
  - \footnote{text1} shows a footnote³ with a number, and
  - \footnote\*{text2} shows a footnote without a number.
- Additionnally, a footnote with bibliography citation may be added:
  - $\blacksquare$  \footcite{keys} shows the given citations in a footnote.

3text1 text2





- The LE2I-UTBM theme provides a macro to put a text on the side of the frame: \sidenode{text}
- $\blacksquare \ \, \mathsf{Example:} \ \, \mathsf{\setminus} \mathsf{sidenote} \{ \mathsf{text} \ \, \mathsf{on} \ \, \mathsf{the} \ \, \mathsf{side} \}$

■ The LE2I-UTBM theme provides a macro to put a citation on the side of the frame: \sidecite{labels}

It is equivalent to: \sidenote{\cite{labels}}

- 6 Slide Content
  - Drawing
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- The LE2I-UTBM theme provides a convenient macro to include links to multimedia resources.
- videolink[options]{resource\_path}{img\_path}
  - Display a picture with a link button. When the user click on the picture, the resource is run (viewed).
  - options are the options to pass to the \includegraphics (width...)
  - resource\_path is the path to the multimedia resource.
  - img\_path is the path to the picture to display in the slide.









- The LE2I-UTBM theme provides a convenient macro to create links to other slides with a picture in the link.
- \picturegoto[options]{label}{img\_path}
  - Display a picture with a link button. When the user click on the picture, the slide with the given label is displayed.
  - options are the options to pass to the \includegraphics (width...)
  - label is the label of the target slide.
  - img\_path is the path to the picture to display in the slide.





- The LE2I-UTBM theme provides a convenient macro to create links to other slides with a text in the link.
- \textgoto{label}{text}
  - Display the given text with a link button. When the user click on the text, the slide with the given label is displayed.
  - label is the label of the target slide.
  - text is the text to display in the slide.

▶ this is a link to another slide



- 7 Low-level Macros
  - Handlers on Frames
  - Graphic Axes
  - Picture Filename Resolution





If you want to do something at the beginning and ending of each frame, you could use: \AtBeginFrame{something}

\AtEndFrame{something}

- The following macro display the graphic axes that may be used for putting something somewhere on the slide: \graphicaxes
- The following macro draw the axes at the coordinates (0,0):  $\backslash$ showgraphicaxes
- The size of the axes corresponds to 1 unit.

## **Example**

```
ackslashgraphicaxes
```



- For searching a picture file into the search paths defined with \graphicspath, you could use the two following macros.
- For searching the file: \resolvepicturename{partial filename}
- The previous macro sets the global macro \resolvedfilename to the full name of the file if it was found; or to \relax if it was not found.

## **Example**

```
\graphicspath\{\{./imgs\}\}
\resolvepicturename{myfile}
\pgfdeclareimage{myfileid}{\resolvedfilename}
\pgfuseimage{myfileid}
```





## **End of the Documentation**

