The KIT Corporate Design for LaTeX

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Contents

Introduction

This user manual describes how to use the classes and packages which belong to the KIT layout as specified by the *Gestaltungsrichtlinien* [1].

The first section is related to colors. The color names used by LaTeX are shown together with a rectangle printed using this color. With respect to the color examples it must be mentioned that the shown color varies for different printers and deviced and even may depend on the filling state of the device providing the device base colors.

The second section treats options which can be used by all classes belonging to the KIT design as well as with the KIT theme of the *beamer* class.

At the third section commands common to KIT all classes and the KIT theme of the *beamer* class are described.

The following sections describe options and commands used with specific KIT classes and the *beamer* KIT theme, each section for a different document type.

A final section holds information on the version of classes and packages discussed here.

Appended are a short bibliography and an index.

1 Colors

Color specifications according to the KIT *Gestaltungsrichtlinien* [1] are provided by the package *KITcolors*. This package is included by the classes and packages implementing the KIT layout for LaTeX. Thus, the colors are available throughout all KIT classes and packages.

1.1 Basic colors

Basic colors of the KIT layouts are a special *green*, a special *blue*, and *black*. In addition there is the background color *white*. The exact color values of *green*, *blue* are given by the KIT *Gestaltungsrichtlinien* [1]. Therefore, the KIT colors `KITgreen` and `KITblue` are predefined. All three colors can be used at the five saturations 100%, 70%, 50%, 30% and 15%. To have similar names for all these colors at the given saturations the standard color *black* has been given the synonym `KITblack`. For the three colors at another saturation than 100% the saturation has been added to the basic color name. All these colors are defined at the LaTeX package *KITcolors* using the package *xcolor*.

The following list shows the three colors, each at the five different saturations: 100%, 70%, 50%, 30% and 15%. Together with the colors hints are given where the colors should be used.

Green

`KITgreen` `KITgreen70` `KITgreen50` `KITgreen30` `KITgreen15`

The color name `KIT-Gruen` as given by the *Gestaltungsrichtlinien* is provided as an alternate name for the color itself as well as for the derived color names `KIT-Gruen70`, `KIT-Gruen50`, `KIT-Gruen30`, and `KIT-Gruen15`.

The color *green* is used with the following components:

- The green sectors within the logo,
- marks within itemize lists,
- headlines, and
- decorative and highlighted elements, e.g. within displays.

It is NOT to be used with the following components:

- Large area elements,
- (KIT) frames,
- bars showing from where it comes, and
- shadow graphics.

Blue

`KITblue` `KITblue70` `KITblue50` `KITblue30` `KITblue15`

The color name `KIT-Blau` as given by the *Gestaltungsrichtlinien* is provided as an alternate name for the color itself as well as for the derived color names `KIT-Blau70`, `KIT-Blau50`, `KIT-Blau30`, and `KIT-Blau15`.

The color *blue* is used with the following components:

- Main color of KIT images of the first level (by color overlay) and
- as decorative color (within tabulars or displays).

It is NOT to be used with the following components:

- Headlines,
- itemize marks,

- (KIT) frames, and
- vector graphics.

Black and Gray

The colors *black* and *gray* are used with the following components:

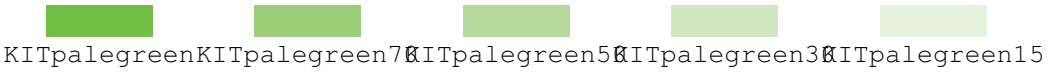
- The media frame (15% black),
- information bars (50% black),
- subheadlines and running text,
- vector graphics (15% black), and
- areas and bars in tabulars and displays.

1.2 Additional colors

Beside the basic colors seven additional colors are provided to be used at drawings and pictures. These colors should be used very rarely at other places. Especially, they are not to be used to emphazise text. In addition, the same intensities are available as with the basic colors.

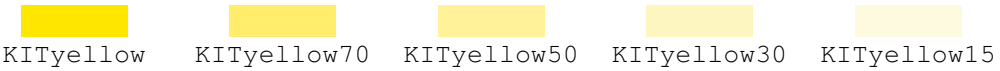
The following additional colors are provided:

Palegreen



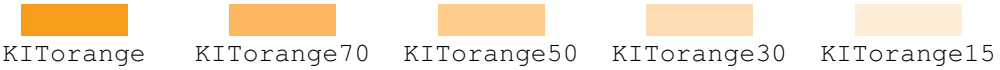
The color name `KIT-Maigruen` as given by the *Gestaltungsrichtlinien* is provided as an alternate name for the color itself as well as for the derived color names `KIT-Maigruen70`, `KITpalegreen50`, `KITpalegreen30`, and `KITpalegreen15`.

Yellow



The color name `KIT-Gelb` as given by the *Gestaltungsrichtlinien* is provided as an alternate name for the color itself as well as for the derived color names `KIT-Gelb70`, `KIT-Gelb50`, `KIT-Gelb30`, and `KIT-Gelb15`.

Orange



The color name `KIT-Orange` as given by the *Gestaltungsrichtlinien* is provided as an alternate name for the color itself as well as for the derived color names `KIT-Orange70`, `KIT-Orange50`, `KIT-Orange30`, and `KIT-Orange15`.

Brown

The color name `KIT-Braun` as given by the *Gestaltungsrichtlinien* is provided as an alternate name for the color itself as well as for the derived color names `KIT-Braun70`, `KIT-Braun50`, `KIT-Braun30`, and `KIT-Braun15`.

Red

The color name `KIT-Rot` as given by the *Gestaltungsrichtlinien* is provided as an alternate name for the color itself as well as for the derived color names `KIT-Rot70`, `KIT-Rot50`, `KIT-Rot30`, and `KIT-Rot15`.

Lilac

The color name `KIT-Lila` as given by the *Gestaltungsrichtlinien* is provided as an alternate name for the color itself as well as for the derived color names `KIT-Lila70`, `KIT-Lila50`, `KIT-Lila30`, and `KIT-Lila15`.

Cyanblue

The color name `KIT-Cyan-Blau` as given by the *Gestaltungsrichtlinien* is provided as an alternate name for the color itself as well as for the derived color names `KIT-Cyan-Blau70`, `KIT-Cyan-Blau50`, `KIT-Cyan-Blau30`, and `KIT-Cyan-Blau15`.

2 Common Options

2.1 Options related to color

2.1.1 Options specifying the color model

All colors depend on the underlying color model. Two important color models are RGB specifying the red, green and blue components fo the color, and CMYK specifying its cyan, magenta, yellow and black components. Most devices rely on one of these two color models.

Devices emitting light like monitors or projectors mostly are based on the RGB color model. For these devices RGB color model is better suited.

Other devices like printers or plotters use colors reflecting specific parts of incoming light. In this case generally the CMYK color model is better suited.

However, these general rules may not be valid for a specific device. Thus, the following options are provided to change the default color model:

`cmyk` Colors are specified based on the CMYK color model.
`rgb` Colors are specified based on the RGB color model.

2.1.2 Options to switch between colored and b/w output

Documents can be printed in color or in black and white (and posasibly gray). Switching to color results in using colored logos and KIT markers of `itemize` lists, which are printed in black and white in case of black and white output. Whether color or black and white is the default depends on the document type. Color or black and white output can explicitely selected using the following options:

`bw` for the b/w version, and
`color`
for the colored version

2.2 Options selecting the English or German layout variant

In addition, options to select a language specific layout – according to the *Gestaltungsrichtlinien* [1] only English and German layouts are available – are valid for all KIT layouts and can be handled generally. These options must be specified as document class option or as option of the `\usetheme` command selecting the KIT design in case of presentations using the *beamer* class. For both languages four different options can be used, which however are synonyms resembling the options to be specified with *babel*.

Please remember that these options do only select the language for the layout, i.e. the logo or the KIT anouncement. The language(s) of the document must be specified at the *babel* package which must be loaded by the user.

Loading the *babel* package by the document class is not possible since this would not allow to use languages not supported by the document class. Even forwarding the language options to the package *babel* seems not to be possible as long as the package is loaded by the user. Thus, no language support aside selecting the English or German layout variant can be given by the class.

2.2.1 Options for German

For German documents the following four (identically behaving) language options are supported:

```
german
ngerman
germanb
deutsch
```

Dialects of German are not supported.

2.2.2 Options for English

For english documents the four (identically behaving) language options

```
english
UKenglish
USenglish
englisch
```

are supported.

3 Common Commands

Commands common to classes and packages of the KIT layout are defined by the LaTeX package *KITgeneral*. For example, this package defines the symbol the KIT layouts uses at `itemize` lists as well as commands to insert graphics or framed material.

3.1 Commands to switch between colored and b/w output

The KIT logo, the special KIT mark with itemize lists and some more objects can be printed in color or in black and white (and possibly gray). The commands to switch between these versions are

`\BW` to switch to the b/w version, and
`\Color`
to switch to the colored version.

3.2 Commands to specify place and street

Aside letters some more document types show the address of the KIT or an organizational unit. This address defaults to be the KIT address but can be changed using the following commands:

`\Street{<street>}`
In case of other locations than north or south campus the street part of the address must by this command to be the argument `<street>`.

`\Place{<place>}`
With external locations the place is not known a priori. Thus, it must be specified using this command with the place given as argument.

3.3 Commands to specify the URL

By default, the KIT URL `www.kit.edu` is shown at some places at different document types. The default URL may not be appropriate at all cases. To change the URL the following commands are provided:

`\KITURL{<KIT-URL>}`
Command to replace the default WEB server `www.kit.edu` by the specified `<KIT-URL>`.

`\WWW{<WEB page>}`
Specify a more specific WEB page replacing the default WEB page of the KIT. The complete internet address is specified as argument.

3.4 Commands changing the Email address

Common to all members of the KIT domain is an E-mail address within the domain `kit.edu`. The domain is predefined for all document classes. In rare cases it may be desirable to specify a different E-mail domain. Therefore, aside a command are specify the personal part of the E-mail address a command is provided to change the E-mail domain:

`\EmailDomain{<domain>}`
Command to replace the default domain part `@kit.edu` of the E-mail address by the specified argument.

`\EmailName{<name>}`
Specify the name part of the E-mail address, to which the domain name (default: `@kit.edu`) is appended.

3.5 Commands for the Image on the Title Page

The image to be used as title image is scaled to a the neccessary width which depends on the document class in use, e.g. to a (virtual) width of 234mm (virtual width of the slides minus twice the frame width) in case of slides. The image argument is required. Optionally, options to be forwarded to the command `\includegraphics` can be specified; they are inserted before the width specification. Be careful to use no options wich may cause errors with `\includegraphics`. Especially, a bounding box can be specified for PostScript images only; otherwise the option `viewport` is to be used instead.

`\KITtitleimage[<opt>]{<image>}`

A variant of the command `\KITtitleimage` is the command `\TitleImage`. It has the same arguments. The difference to `\TitleImage` is that `\TitleImage` does not scale the image to the needed width of the title image. Hence, this command can be used in case of a title image being a part of a larger image by specifyinig an appropriate bounding box/viewport as part of `<opt>`:

`\TitleImage[<opt>]{<image>}`

3.6 Date representations

Dates can be displayed using the name or the number of the month – aside the language dependency, which is resolved automatically. The two commands presented here allow to switch between these variants:

`\DateNumbers`
: From here on, an automatically inserted date uses the number of a month and not its name.

`\DateText`
: From here on, automatically inserted dates use the month name instead the a number.

3.7 A Symbol for Marking List Entries

KIT has developped the symbol to be used to mark the entries in an `itemize` list. Its size in an `itemize` list is 1 ex of the font used for the entry. On the other hand, the symbol is developped at a size of 7 cm×7 cm. The command

`\KITmark`

makes this original symbol available to the user. It can e.g. be scaled to the required size with help of the command `\resizebox`.

3.8 Extra Space Around the Interior of KIT Frames

The length `\vgdist` has already be mentioned. Its purpose is to insert additional white space around the contents of KIT frames in case it is set to a positive length with help of the well known length commands.

3.9 Images According to the KIT Layout

The command `\KITimage` acts like the well known `\includegraphics` command and includes an image. In addition a frame according to the KIT *Gestaltungsrichtlinien* [1] is drawn around the image. Due to rounded upper right and lower left corners these edges of images are clipped by the frame. The length `\vgdist` can be used to insert extra space between image and frame.

The command is used as follows:

`\KITimage[<options>]{<image>}`

The mandatory argument <image> is the mandatory argument of \includegraphics and specifies the image to be included. The optional argument <options> is the optional argument of \includegraphics. Specification of options not appropriate for the type of <image> (like the option bb instead of viewport in case of a PDF image) can cause an error with a missleading error message.

3.10 Vector Graphics According to the KIT Layout

The command \KITvectorgraphics is a variant of the command \KITimage and has the same arguments. In addition the background within the frame is colored light gray (KITblack15) according to the KIT rules for vector graphics.

The command syntax is

```
\KITvectorgraphics[<options>]{<image>}
```

with arguments as specified with the \KITimage command.

3.11 Frames in the Style of the KIT Layout

The command \KITframe draws a frame with or without background around the contents specified as second argument, i.e. it acts similar to the the command \fbox. Extra space around the contents of the box can be inserted by setting the length \vgdist to the wanted extra space.

The syntax of the command is

```
\KITframe[<bg>]{<text>}
```

Here, <bg> (e.g. bg) may be any argument except relax to activate the gray background (the argument is checked against the default value \relax). <text> are the contents set within the frame.

Since <text> is placed within a simple box register, it must not span multiple lines. However, text spanning over multiple lines can be put within a \parbox or something similar thus providing multi line arguments. Instead of a \parbox a minipage environment can be used, but in this case vertical space at the beginning and ending of the minipage is stripped.

4 Package *KITmcfloat*

On occasion a twocolumn mode was wanted for one of the document classes. This twocolumn mode could be implemented using package *multicol*. However, this has the disadvantage that package *multicol* does only support floats spanning all columns but no onecolumn floats like the option `twocolumn` for standard classes like *article*. This package tries to implement onecolumn floats for use with package *multicol*.

With option `twocolumn` – where provided for a KIT document class – this package is not needed as long as only the standard floats `figure` and `table` are used.

However, in case additional floats are to be defined, the command `\newfloat` must be extended to provide onecolumn versions if the new floats. The extension works for new floats defined using package *float*. Up to now package *floatrow* – which can not be used together with package *float* – is not supported.

With respect to onecolumn floats some restrictions hold due to the fact that they are implemented using package *wrapfig* with empty paragraphs. This has some consequences:

- Onecolumn floats can only occur *between* paragraphs.
- The positioning options `t`, `b` and `p` are ignored.
- The default placement of onecolumn floats is according to option `h`.
- In case option `h` is not specified the floats are allowed to float to a position between paragraphs where they better fit. This occurs only in very rare cases.
- In case onecolumn floats are mixed with floats spanning all columns it may happen that onecolumn floats of other float types or succeeding onecolumn floats of the same type are placed before the float spanning allcolumns, since floats spanning all columns generally are placed on a following page.

Moreover, sometimes page pagebreaks can occur leaving pages mostly empty, especially in case onecolumn and multicolumn floats are mixed. This behaviour can be improved using the counter `collectmore` provided by package *multicol*. Tests showed best results for the value -8 which has been choosen as default. In case pages are left too empty changing the value may produce better results.

Onecolumn floats are implemented using a `wrapfloat` environment. Due to the implementation the vertical space following onecolumn floats is too large. Thus, the vertical space must be modified appropriately. For this purpose the special length `\KITintextsep` is provided. The length is given the default value -1.2`\baselineskip`. This value can be changed using the usual lengths commands.

5 Presentations

Presentations are implemented using the document class *beamer*. Thus, users are not bothered by a special document class but can use a commonly used class. The specifics of KIT presentations are implemented as a new theme 'KIT', which is loaded just as any other theme of the beamer class.

Due to the implementation as theme, aside the commands of the beamer class and the commands common to all KIT layouts only two specific lengths, two commands and some size options are offered. The options of the beamer class to select a font size do not work. For everything else please refer to the *User's Guide to the Beamer Class* [2]. In addition, the user's guide provides a tutorial for working with the *beamer* class.

> **Important:** The language options common to all KIT layouts in case of presentations only select the English or German KIT logo an whether the optional frame footer displays the date using English or German variant of the automatically generated date. This requires specifying the language options `english` and `ngerman` when loading the package *babel* – which is requested by the KIT language options. However, the KIT thema can not load the package *babel* by itself since in this case no other languages except English and German handled by the layout could be loaded.
>
> Thus, the package *babel* **must** be loaded explicitely **after** choosing the KIT theme. Other languages than English and German used within the presentation must be specified as usual as options when loading the *babel* package. The last language specified becomes the document language. In case no options are specified when loading *babel* the language specified as KIT language option becomes the document language. In case a KIT language option has not been specified, too, German becomes the document language.

To get the correct vertical alignment the option `t` should be specified at the `\documentclass` command.

5.1 Author and Date on the Title Page

The *Gestaltungsrichtlinien* [1] do not specify a field for author and date on the title page. Instead, the *Gestaltungsrichtlinien* suggest to include **author** and **date** into the subtitle shown below the title. Since nothing is told on how to position author and date within the subtitle, author and date are not inserted into the subtitle.

It is left to the author to name his/her name and the date as part of the argument of the `\subtitle` command. This can be done either using the *beamer* commands `\insertauthor` for the author and `\insertdate` or by explicitely entering name and date.

5.2 Options

The beamer theme 'KIT' can be used with some options, which are specified as (comma separated) optional argument(s) of the `\usetheme` command:

```
\usetheme[<options>]{KIT}
```

Most of the options specify a (base) font size. Using another options specifys to display an automatically generated foot line. Finally an option is provided to number the title page 0 instead of 1.

First, the options to select a base font size are discussed. Available are the following size options:

`16pt` for normal sized fonts at 16pt,
`18pt` for normal sized fonts at 18pt,
`20pt` for normal sized fonts at 20pt,
`22pt` for normal sized fonts at 22pt, and
`24pt` for normal sized fonts at 24pt

The default base size is 20pt according to the *Gestaltungsrichtlinien* [1].

`nofoot`
: By default, the footer of the frames shows (from left to right) the frame number, the date, the (short) author, the (short) title, and the (short) organizational unit. Everything except the frame number can be suppressed using this option.

`titlepage0`
: By default, the title frame is numbered 1 (but the frame number is not displayed). This conform to some viewers which can show the number of frames up to the current one together with the total number of frames (or the number of remaining frames). At least in case of handouts it may be preferable to number the frames starting with 1 at the frame following the title frame. This can be reached by specifying the option `titlepage0`.

`KITtoc`
: By default, table of contents entries are not changed from the default of the *beamer* class. However, a KIT variant is provided which can be activated using this option. In this case, `\section`, `\subsection`, and `\subsubsection` entries have a KIT mark in front of them, similar to entries of the topmost level of itemize lists.

  Alternatively, the KIT style for `\section`, `\subsection`, and `\subsubsection` entries can be activated by the commands

```
\setbeamertemplate{<section in toc>}[KIT]
\setbeamertemplate{<subsection in toc>}[KIT]
\setbeamertemplate{<subsubsection in toc>}[KIT]
```

  respectively.

`compacttoc`
: By default, table of contents entries of hidden sections are separated by a `\vfill` command. Using this option the skip between these entries is set to 1ex instead to generate a more compact table of contents.

5.3 Lengths and Commands

The following lengths specify maximal width and height of the title image. They are provided to allow the user an appropriate scaling of an image to be used as title image.

`\titleimagewd`
: Width of the title image. When inserting the title image it is scaled to fit this width.

`\titleimageht`
: Height of the title image.

For headings in the middle of a frame a special command is provided:

```
\heading{<heading>}
```

The heading itself is specified as argument.

At a table of contents by default hidden sections are separated by `\vfill` command, and shown sections by `\vspace{1.5em}`. These fixed skips have been replaced by lengths which allow the user to specify the skips to be used:

`\tocsecskip`
: Vertical skip used to separate shown sections.
  (Default: `\fill`)

`\tochideskip`
: Vertical skip used to separate hidden sections.
  (Default: `1.5em`)

The following commands mainly select the language specific KIT logo. In addition, a few language specific phrases are set, which are of no great importance in case of presentations.

`\English`
: selects the English variants of the logo and of some general phrases.

`\German`
: selects the German variants of the logo and of some general phrases.

An approved logo may be specified to be placed at the upper right corner of the title page. The logo is specified using the beamer command

`\logo{<text>}`

where the argument is the code to generate the logo. In most cases it will be an `\includegraphics` command to include a ready to use image. To include the logo into the footer, a similar command could be specified at the optional argument of the *beamer* command `\institute`.

However, there are **restrictions** to this logo: It must not be wider and should bo not higher than the KIT logo, and moreover it must optically be **not larger than 2/3 of the KIT logo**. Thus, the width of the additional logo is checked, and if the logo is wider than 2/3 of the KIT logo, a warning is given and the logo is rescaled to 2/3 of the width of the KIT logo.

As mentioned above an approved logo must not be wider than 2/3 of the KIT logo. Since lengths within the *beamer* class are rescaled, length units like cm or do not work as expected. Instead, the length

`\KITlogowd`

has been provided holding the maximal width allowed for an additional logo on the title page.

An additional logo within the footer must not be higher than 2/3 of the KIT logo at the page header. Due to rescaled lengths within the *beamer* class, length units like cm or do not work as expected. Instead, the length

`\KITlogoht`

has been provided holding the maximal height allowed for an additional logo within the footer.

In case a frame footer is to be displayed, it is generated from date, author, (short) title and organizational unit. In case the default footer is not appropriate, author, title, and organizational unit can be replaced by user specific footer information. In both cases, the footer information can use more than a single line. The number of possible lines – it should be not more than at most three lines – is restricted by the frame width.

The different informations of the automatically generated footer are separated by space based on the length

`\footersepwd`

which can be changed *before* `\begin{document}` if needed. Author and title are by default separated by 0.5`\footersepwd`, title and organizational unit by `\footersepwd`. The default value is 10pt.

Author and title are separated by text – specified by the user – and/or white space. If no text has been specified only space is used.

To specify text, the command

`\AuthorTitleSep{<text>}`

is provided. The argument is inserted between author and title followed by the separating space according the command `\AuthorTitleSpaceFactor`. `\AuthorTitleSep` defaults to `~–~`.

By default, author and title are separated by half the space separating title and organizational unit, where the space between title and organizational unit is given by the length `\footersepwd`. The space is shortened due to the fact that title and author can be placed within a single multiline box. However, in case different multiline boxes are used for author and title this may not be appropriate. Hence. the command

`\AuthorTitleSpaceFactor{<fraction>}`

has been provided to change the default factor of the length `\footersepwd` setting the space separating author and title to `<fraction>*\footersepwd`. To correctly build the footer the command `\AuthorTitleSpaceFactor` must be used *before* `\begin{document}` since at `\begin{document}` the available line length for the footer informations is computed depending on the separating spaces. The default value is 0

In addition, three commands are provided to reserve space for author, title and organizational unit displayed at the footer by specifying the fraction reserved for these informations. The remaining part of the footer as well as the separating space are not treated to be part of this available space. Thus, the sum of these three fraction should add up to 1.

The first of these three commands is related to the author giving the fraction of the space available to be used for displaying the author:

`\FooterAuthorfraction{<fraction>}`

The argument is a number restricted by $0 \leq$ `<fraction>` < 1, where the value 0 has the special meaning not to reserve any space for the author but to integrate the author information into the title information and placed before the title followed by the separating text and space. In case of a positive value the author can use multiple lines but should not be longer than at most three lines. The default value is 0.

The next commands is provided to specify the fraction of the space to be used for displaying the title:

`\FooterTitlefraction{<fraction>}`

The argument is a number restricted by $0 <$ `<fraction>` < 1. In case the reserved place for the author has been set to 0, the value holds for author and title together. The title can use multiple lines but should not be use more than at most three lines. The default value is 0.7.

The last of the three commands reserving space within the footer is

`\FooterInstfraction{<fraction>}`

and reserves a fraction of the available space to be used for the organizational unit. The organizational unit can also use multiple lines – however if possible not more than at most three lines. The default value is 0.3.

Thus, the available space at the footer is used for author, title, and organizational unit. The fractions to be used for author, title, and organizational are set by `\FooterAuthorfraction`, `\FooterTitlefraction`, and `\FooterInstfraction`, resp.. Since no other than these three informations are using the available space and the separating space is not part of the available space, the three fractions should add up to 1. Thus, changing one of the fractions should include adapting the other value(s) to preserve the sum of them to be 1. However, the organization unit always is placed flush at the right border, i.e. in case the sum exceeds 1 the the organizational unit and the title may collide.

In case the default footer information consisting of author, title,

`\KITfoot[<text>]`

can be used to specify a (one line) footer. The command automatically requests the footer to be shown. In case the footer does not fit into the line it is not broken automatically but extends into and over the slide border. To use multiple lines and (automatical or manual) line breaks the footer should be placed within a `\parbox` or `minipage` environment of appropriate width vertically aligned at the topmost line. The width of this box must not exceed 118 mm, and the number of lines should be restricted to 2.

The command `\usenavigationsymbols` inserts navigation symbols at the lower right corner of the user area. Used without argument default navigation symbols are inserted. The navigation symbols to be inserted and their sequence can be specified using the optional argument `<navsyms>`:

`\usenavigationsymbols[<navsyms>]`

Here `<navsyms>` consists of one or more of the letters

- **`s`** to insert the slide navigation symbol,
- **`f`** to insert the frame navigation symbol,
- **`H`** to insert the section navigation symbol,
- **`h`** to insert the subsection navigation symbol,
- **`d`** to insert the doc navigation symbol, and
- **`b`** to insert the backward - find - forward symbols.

Default are the letters `fHb` requesting the navigation symbols for frames, sections as well as the forward/backward and find symbols.

6 Letters and Faxes

For letters the document class *KITbrief* is provided and for faxes the class *KITfax*. Both classes are very similar and in many cases use the same options and commands. Hence, letters and faxes are handled together. In case of options and commands restricted to one of these two classes this exception is explicitely mentioned.

The classes recognize several options and provide commands to be used with letters and faxes.

6.1 General remarks

KIT letters use three different forms: using the full and the reduced media frame for external letters and a different form with reduced media frame for internal letters:

- External letters with full media frame are printed on “Schmuckbogen” which already have the media frame preprinted. Thus, no media frame is to be generated for this case.
- External letters with reduced media frame are printed on white paper. Hence, the reduced media frame must be set by LaTeX.
- Internal letters use an enlarged media frame since the footer information on bank accounts is needed.

The form wanted can be selected by specifying the corresponding option or switching to the form wanted using a corresponding command. For faxes there is just a single form.

Many informations based on commands do not change for a single user. Hence, the user should place these commands (i.e. informations) into a user specific setup file and include it using the `\input` command to avoid reentering the same informations again and again.

6.2 Options

6.2.1 Option `hyperref` to load the package *hyperref*

The document classes *KITbrief* and *KITfax* load for internal use the package *bophook* which *must* be loaded *after* the package *hyperref*. However, the user can not load a package before the `\documentclass` command. To solve this problem the option

`hyperref`

is provided to be used instead of explicitely loading the package *hyperref*. If this option is present, the document class loads the package *hyperref* at the right time.

6.2.2 Options selecting the letter form

As known from 6.1 there are three different letter forms, external letters with full and reduced media frame as well as internal letters. Default is to use the reduced media frame; thus, no option is provided for this case. Options are provided for external letters using the “Schmuckbogen” and internal letters:

`KITpaper`
: Select the form using the “Schmuckbogen”.

  This option is available for letters only!

`internal`
: Select the form for internal letters.

  This option is available for letters only!

6.2.3 Options selecting the campus

The address of the sender of the letter is different for “Campus Nord”, “Campus Süd” and potential other locations. Only few reside at other locations, and hence no shorthand is provided for this case. In most cases the sender resides at “Campus Nord” or “Campus Süd”, for which options are provided to set the informations for this two locations:

`CS` Activate informations for “Campus Süd”
`CN` Activate informations for “Campus Nord”

6.2.4 Options selecting the sector

In case of letters informations on the bank account may be displayed at the foot of the first page depending on the sector the letter belongs to. For faxes no account informations are provided, i.e. these commands are not available with faxes.

There are four different sectors, for each of which an option is provided to generate the corresponding bank account information:

`Uni` Account informations for the sector of the University in general.

This option is available for letters only!

`Stud` Account informations for the sector of the University related to “Studiengebühren”.

This option is available for letters only!

`LRS` Account informations for the large scale research sector.

This option is available for letters only!

`KIT` Account informations for the most general sector of the KIT.

This option is available for letters only!

6.2.5 Option to suppress account informations

Sometimes no information on bank accounts is needed or wanted. This is also valid for KIT external letters. To suppress this information the following option is provided:

`noaccount`
Suppress all account informations for the chosen section.

This option is available for letters only!

6.2.6 Options related to date representations

LaTeX automatically inserts the current date if no date is specified using the `\date` command, whose argument is used as date unchanged. Besides the language the date can be shown using numbers only or using names of months. The language dependency is resolved by language options. The usage of month names is controlled by the following two options:

`datenum`
Date representations using only numbers

`datetxt`
Date representation using the name of the month (default)

6.2.7 Option for twosided printing

Letters are printed one- or twosided depending on the printer and its selections. However, if multiple letters are formatted out of a single source, each letter must begin on an odd page – which it does always in case of onesided printing. On the other hand, in case of twosided printing an empty page must be inserted if the foregoing letter uses an odd number of pages. The option

`twoside`

activates the insertion of an empty page between two letters if the first of them has an odd number of pages.

6.3 Commands

6.3.1 Commands selecting the letter form

As known from 6.1 three different forms must be supprted: external letters with full and reduced media frame and internal letters. Thus, three commands are needed to switch to the wanted letter form.

For faxes, a single form with no variants is used. Thus, for faxes there are no commands to select a form.

`\KITpaper`
: Select the form for printing using the “Schmuckbogen”.

  This command is available for letters only!

`\Mediaframe`
: Activate the form using the reduced media frame.

  This command is available for letters only!

`\Internal`
: Select the form for internal letters.

  This command is available for letters only!

6.3.2 Command inserting the number of pages of a letter

The number of pages of the *current* letter can be inserted using this command:

`\Pages`

Since this command is implemented with help of a `\label`, the document must at least be formatted twice to get the number.

6.3.3 Command to specify the contents of the field “Our Reference”

To give a letter (or fax) or a series thereof a specific signature the specification of “Reference” is provided. The characters making the signature are inserted by the command

`\Reference{<Zeichen>}`

and will be inserted following the tag “Our Reference”. The specification of the signature of a received letter (or fax) is not aupported by the “Gestaltungsrichtlinien” [1].

`\KITWWW{<www-server>}`
: Earlier versions of the classes *KITbrief* and *KITfax* used `\KITWWW` to specify an URL other than the deafult KIT URL. Now the command `\KITURL` should be used instead. For compatibility with existing documents these two classes define `\KITWWW` to be a synonym of the new comamnd `\KITURL`.

6.3.4 Campus related informations

Address informations are related to the campus where the sender resides. Since there are external locations, the related information can be replaced piece by piece. For the north and south campus commands are provided to insert the campus related informations.

`\Returnaddress{<address>}`
: Address of the sender as displayed within the address window of external letters. With internal letters and faxes no sender information is shown within the address window. Hence this command is disabled for faxes.

  This command is available for letters only!

`\CS` This command inserts the information related to the south campus, especially return address, street and place. In addition, the campus specific part of the phone and fax nambers are set.

\CN This command inserts the information related to the north campus, especially return address, street and place. In addition, the campus specific part of the phone and fax nambers are set.

6.3.5 Sector related informations

The KIT uses different bank accounts for different sectors which are shown by external letters. Internal letters and faxes do not display a bank account, i.e. all these commands are only available for letters. The commands specify the sector and thus yield the corresponding information on bank accounts:

\Uni Bank account for sector “Universität”.

This command is available for letters only!

\Stud

Bank account for sector “Universität (Studiengebühren)”.

This command is available for letters only!

\LRS Bank account for the large scale research sector.

This command is available for letters only!

\KIT Bank account for the general sector.

This command is available for letters only!

6.3.6 Institution related informations

Here all commands are presented which are common to a single institution. Also included is a command to specify a department.

\PhoneInst{<number>}

Set <number> to be the institution related part of the phone number (initialized for the south and the north campus by the commands \CS and \CN, resp.). The personal part of the phone number as set by the command \PhoneDirect – will be appended. Institutional and personal part are separated by a dash.

\FaxInst{<number>}

The fax number is specified in the same way as the phone number, and this command gives the institutional part of the fax number and is automatically set by \CS or \CN. Again, the personal part of the fax number as given by \FaxDirect will be appended, and institutional and personal part are separated by a dash.

\Institution{<inst>}

Set <inst> to be the name of the institution.

\WInstitution{<inst>}

Name of the institution as shown at the address window of letters.

This command is available for letters only!

\Head{<name>}

Specifies the name of the head of the institution.

\Department{<dept>}

Specification of the name of the department.

\Building{<building>}

Specifies the bulding number.

6.3.7 Personal informations

Finally, there are personal informations about the official writing the letter:

\Official{<name>}

Set the name of the official writing the letter.

\PhoneDirect{<number>}

Sets the personal part of the phone number, where the institutional part is set by default or using \PhoneInst.

`\Phone{<number>}`
: Allows to specify the complete phone number using a single command.

`\FaxDirect{<number>}`
: Sets the personal part of the fax number, where the institutional part is set by default or using `\FaxInst`.

`\Fax{<number>}`
: Allows to specify the complete fax number using a single command.

6.3.8 English and German letter variants

The letter layout according to the KIT *Gestaltungsrichtlinien* [1] German and English variants of the letter form are supported. However, whereas the form is restricted, the language used within the letter is not restricted. These commands should only be used between different letters; otherwise some text labels may be in English and some in German. In addition to change some text, the date form and the variant of the KIT logo are adapted to the new language.

`\German`
: The next letter will be written using the German letter variant.

`\English`
: The next letter will be written using the English letter variant.

6.3.9 National and international letters

The country, where the KIT resides, is included into the sender information only in case of international letters. Letters in English are assumed to be international letters, German letters are assumed to be national. Thus, switching the language will switch following letters to be international in case English is selected and national in case the German language is selected. Since this may not be appropriate commands are provided to explicitely require a letter to be national or international.

`\International`
: The command `\International` requires the next letter to be international independant of the language. The country name is shown in German for German letters and in English for English letters.

`\InternationalD`
: This command like `\International` requires to an international letter to be written. In addition, the country name is shown in German independant of the selected language.

`\InternationalE`
: This command like `\International` requires to an international letter to be written. In addition, the country name is shown in English independant of the selected language.

`\National`
: With this command the next letter will – independant of the language – be a national letter, i.e. the country name will not be part of the sender information.

6.3.10 Important commands for letters and faxes

In addition to commands specific to KIT letters other letter commands are important and in some cases may not be omitted. These commands and environments are handled here in short.

`\begin{letter}{<address>} ... \end{letter}`
: Required environment to write a letter. In case of external letters the address is specified as argument to this environment.

  In case of internal letters according to the KIT *Gestaltungsrichtlinien* [1] no address is specified, but the name(s) of recipients, where multiple recipients are separated by commas. According to the *Gestaltungsrichtlinien* the recipients are displayed within a single line.

`\begin{fax}{<address>} ... \end{fax}`
: This environment for faxes only is a synonym for the `letter` environment used with letters.

  This option is available for faxes only!

`\opening{<greeting>}`
: Required command starting a letter. This command is essential, since by this command e.g. the letter head as well as the sender information is set. `{<greeting>}` is used as salutation.

`\date{<date>}`
: This command can be used to specify the date shown by the letter head. The argument replaces the otherwise automatically inserted current date.

`\subject{<subject>}`
: This command sets `<subject>` to be the text announcing the subject of the letter.

`\closing{<closing>}`
: By this command `<closing>` is declared to be the text closing the letter. It is followed by the signature.

`\signature{<signature>}`
: This command declares the argument `<signature>` to be the name, as it appears under the closing (leaving space to sign the letter). Multiple lines must be separated by the usual `\\`.

`\cc{<cc>}`
: By this command a list of names can be given to whom copies of the letter are sent. Again, `\\` can be used to split lines.

`\encl{<enclosures>}`
: Enclosures are specified using this command; multiple lines are separated by `\\`.

`\ps{<postscriptum>}`
: By this command additional text after the closing – specified as argument – can be inserted.

6.3.11 Commands to suppress and enable account informations

Displaying information on bank accounts can be disabled or enabled for external KIT letters by the following commands. By default, information on bank accounts is displayed.

`\NoAccount`
: Beginning with the next letter, no informations on bank accounts are displayed.

  This command is available for letters only!

`\Account`
: Beginning with the next letter, informations on bank accounts are displayed again.

  This command is available for letters only!

6.3.12 Special commands for faxes

In case of a fax, the phone number the fax is sent to is shown near the place where a letter has its address window. To make this possible, the user needs a command to enter the number.

`\FaxTo{<fax number>}`
: Enter the number the next fax is sent to.

  This command is available for faxes only!

In general, the LaTeX class does know the number of pages of a fax and can enter the number of pages by itself. However, in case additional pages are to be sent with the fax, which are not integrated into the fax by LaTeX, LaTeX can no longer compute the number of pages by itself. For this case a command is made available to specify the number of additional pages, from which LaTeX can compute the total number of pages:

`\ExtraPages{<number of pages>}`
: Specification of the number of pages added to the fax to be sent. LaTeX adds this number to the number of pages generated by LaTeX.

  This command is available for faxes only!

7 Posters

For posters the document class *KITposter* is provided. The class recognizes several options and providea commands to be used with posters.

7.1 General remarks

The document class *KITposter* is build on the base document class *sciposter*. Only the layout had to be modified to conform with the KIT layout. In addition, the KIT specific commands discussed at section 3 are available.

Thus, most commands ond options of the document class *sciposter* can be used and work as expected. Exceptions are all papersize options and commands not mentioned by this document as well as everything related to logo, title, subtitle, author, institute, legal addendum and KIT URL, which are set as specified by the “Gestaltungsrichtlinien”.

The font options have effect only on the main text and do not work on the exceptions mentioned above. Nontheless, the font size of the body text is enlarged or shrunken according to the specified font size option and commands.

To avoid the documentation of the class *sciposter* to be read in addition the commands and option which can be used by class *KITposter* the available options and commands are documented by this document.

7.2 Options

Paper size options:

`a0` Paper size ISO A0 (83.96cm $\times$ 118.82cm) for scientific posters using a normal font size of 25pt.

This is the base – and default – paper size for KIT posters. The other A sizes are derived from this by scaling the paper and font sizes (by a factor of $1/\sqrt{2}$ when increasing the format number by 1), and the paper size B0 is found by scaling it with $\sqrt[4]{2}$.

`a1` Paper size ISO A1 (59.4cm $\times$ 83.96cm) for scientific posters using a normal font size of 20pt.

`a2` Paper size ISO A2 (41.98cm $\times$ 59.4cm) for scientific posters using a normal font size of 17pt.

`a3` Paper size ISO A3 (29.7cm $\times$ 41.98cm) using a normal font size of 14pt.

`a4` Paper size ISO A4 (21cm $\times$ 29.7cm) using a normal font size of 14pt (smaller normalsize fonts are not supported by the *sciposter* class).

`b0` Paper size ISO B0 (100cm $\times$ 141.4cm) for scientific posters using a normal font size of 30pt.

The other B sizes are derived from this by scaling the paper and font sizes with the factor $1/\sqrt{2}$ when increasing the format number by 1.

`b1` Paper size ISO B1 (70.7cm $\times$ 100cm) for scientific posters using a normal font size of 25pt.

`b2` Paper size ISO B2 (50cm $\times$ 70.7cm) for scientific posters using a normal font size of 20pt.

`b3` Paper size ISO B3 (35.3cm $\times$ 50cm) using a normal font size of 17pt.

`b4` Paper size ISO B4 (25cm $\times$ 35.3cm) using a normal font size of 14pt.

Orientation options:

`portrait`
The default orientation of KIT posters is portrait. Thus it is not neccessary to specify this option.

`landscape`
To create posters on landscape paper this option must be specified.

Title and subtitle/author color:

`blacktitle`
The title is to be set in black or KIT green. The default is to set the title in black. Thus, this option is only provided to explicitely specify the default behaviour.

`greentitle`
: Using this option the title is set in KIT green instead of the default black.

`blacksubtitle`
: The subtitle can be set in black or gray (70% KIT black). The default is a black subtitle. This option is only provided to allow explicitely specifying the subtitle to be set in black.

`graysubtitle`
: To set subtitle and author in gray (70% KIT black), this option can be specified.

Available options of the class *sciposter*:

Font options

`14pt` Normalfont size 14.4pt
`17pt` Normalfont size 17.28pt
`20pt` Normalfont size 20.74pt
`25pt` Normalfont size 24.88pt
`30pt` Normalfont size 29.86pt
`36pt` Normalfont size 35.83pt

`largefonts`
: Select normal font size of paper size one step above current paper size (for a0 it becomes 30pt)

Section header format

`boxedsections`
: Section headers within shadow boxes of color `BoxCol`

`plainboxedsections`
: Section headers within plain boxes of color `BoxCol`

`ruledsections`
: Rule before section headers

`plainsections`
: Plain section headers

Print style options

`draft`
: Generate draft version where graphics are only presented by place holders

`final`
: Generate final version with graphics

7.3 Colors

The class *sciposter*, on which the class *KITposter* is build, uses a number of packages to color text elements. For this purpose special colors are introduced which can be defined appropriately. A number of important colors are mentioned here.

`mainCol`
: Background color (default white)

`TextCol`
: Normal text color (default black)

`SectionCol`
: Section header color (default black)

`BoxCol`
: Background color of a section box (default `KITblack15`)

7.4 Environments defined by the class *sciposter*

The class *sciposter* redefines some environments to make them usable with posters. Mainly floating environments are concerned, which must not float when used at posters. In addition, the abstract is redefined.

`abstract`
: The abstract heading is changed to conform with section headings, and the body is shown using a slanted font.

`figure`
: A no longer floating variant of the common `figure` environment

`table`
: A no longer floating variant of the common `table` environment

`algorithm`
: A not floating variant of floating environment `algorithm` as of the package *algorithm* (this package must not be included!)

7.5 Commands

Most commands needed to build scientific posters are already provided by the base class *sciposter*, on which the the class *KITposter* is build. The most important commands of *sciposter* are handled here together with the additional commands of the class *KITposter*.

`\title{<main title>}`
: The poster title is specified by this command defined by the base class *sciposter*. The title must fit into at most 2 lines in case of a portrait layout and into a single line in case of a landscape layout. In case of a portrait layout an explicite line break can be used within the argument to split the title instead of an automatic line break.

`\subtitle{<subtitle>}`
: This command specifies a subtitle which must fit into a single line.

`\institute{<institute>}`
: The institute or organizational unit is specified using this command provided by *sciposter*. At most 3 lines can be used. The lines should be broken manually.

`\author{<author>}`
: As usual, the author is specified by the *sciposter* command ||. The argument of this command must fit into a single line.

`\date{<date>}`
: The date can be specified using the usual command || provided by the class *sciposter*.

Commands of the class *sciposter*

`\caption[<fraction>]{<text>}`
: A variant of the `\caption` command where the optional argument `<fraction>` specifies fraction of the current column width to be used as width (effective line width) of the caption..
Default value of `<fraction>`: `1`

`\subfigure[<text>]{<tag>}`
: Caption for a subfigure (also used with other floats). `<tag>` is placed before/above the subfigure number, `<text>` is placed behind the subfigure number. Obviously, `<tag>` can be the empty string.

Styles for captions:

`\mastercapstartstyle{<style commands>}`
: General style for float caption startup. `<style commands>` consists of commands used to format the float startup (e.g. “Figure 1:”) inserted as argument.
Default: `\textbf{#1}`

`\algcapstartstyle{<style commands>}`
: Style of an algorithm caption startup (syntax like `\mastercapstartstyle`)

`\figcapstartstyle{<style commands>}`
: Style of a figure caption startup (syntax like `\mastercapstartstyle`)

`\tablecapstartstyle{<style commands>}`
: Style of a table caption startup (syntax like `\mastercapstartstyle`)

Style of the body text

`\mastercapbodystyle`
: General style for teh text of a float caption. `<style commands>` consists of commands used to select the font from this place on.
Default: `\itshape`

`\algcapbodystyle`
: Style of the text of an algorithm caption (syntax like `\mastercapbodystyle`)

`\figcapbodystyle`
: Style of the text of an figure caption (syntax like `\mastercapbodystyle`)

`\tablecapbodystyle`
: Style of the text of an table caption (syntax like `\mastercapbodystyle`)

Names of floats

`\algorithmname`
: Name used as for naming an algorithm within the caption

`\figurename`
: Name used as for naming a figure within the caption

`\tablename`
: Name used as for naming a table within the caption

Representation of counters of floats

`\thealgorithm`
: Rerpresentation of the counter of algorithms

`\thefigure`
: Rerpresentation of the counter of figures

`\thetable`
: Rerpresentation of the counter of tables

7.6 Preloaded and useful packages

In addition to organizational packages the following packages are preloaded:

boxedminipage A package supplying a boxed variant of the `minipage` environment under the name `boxedminipage` with identical syntax

lettrine A package to insert dropped characters at the begin of a paragraph. The most simple form of the command is

```
\lettrine{character}{<text>}
```

(placing `<text>` behind the enlarged and dropped character `<character>`).

shadow A package supplying a command `\shabox{<text>}` to build a box similar to a `\fbox` with a shadow

xcolor An extended replacement package for the package *color*

If you want to use these facilities, please refer to the corresponding package documentation.
In addition, the following packages are very useful but not preloaded:

multicol A package to create multicolumn text. With this package loaded a multicolumn piece of text can be build by using the following environment:

```
\begin{multicols}{<number of columns>}
<text>
\end{multicols}
```

The number of columns can change from one `multicols` environment to the next.

sectionbox Using this package whole sections can be placed within a box with colored background. For this purpose the following environments are defined:

`sectionbox`
`subsectionbox` and
`subsubsectionbox`

The syntax of using these environments is identical for all, in case of the `sectionbox` e.g. using

```
\begin{sectionbox}{<"Uberschrift>}
<text>
\end{sectionbox}
```

The headings are handelt like all other headings of the corresponding level.

amsmath For mathematical formulas the package *amsmath* is very helpful. It defines additional commands and environments for mathematical formulas. Because of the many enhancements supplied by this package the user must refer to the documentation of this package.

8 Versions

This document is based on the following class and package versions:

File	Version	Date
beamerthemeKIT.sty	1.2	June 12, 2012
beamercolorthemeKIT.sty	1.2	June 12, 2012
beamerfontthemeKIT.sty	1.2	June 12, 2012
beamerinnerthemeKIT.sty	1.2	June 12, 2012
beamerouterthemeKIT.sty	1.2	June 12, 2012
KITbrief.cls	1.7	May 30, 2012
KITfax.cls	1.7	May 30, 2012
KITposter.cls	1.2	April 18, 2012
KITcolors.sty	1.4	June 6, 2012
KITdefs.sty	1.4	June 6, 2012
KITmcfloat.sty	1.4	June 6, 2012

References

[1] KIT – Karlsruher Institut f"ur Technlogie: *Gestaltungsrichtlinien.* Version 2.1, Stand November 2010.

[2] Till Tantau: *The Beamer Class – User's Guide to the Beamer Class.* Current version available e.g. from ftp://www.dante.de/pub/tex/macros/latex/contrib/beamer/doc/beameruserguide.pdf and as part of the TEX installation.

[3] Michael H.F. Wilkinson: *Manual for Preparation of Posters of any size using* `sciposter.cls`. Current version available e.g. from ftp://www.dante.de/pub/tex/macros/latex/contrib/sciposter/scipostermanual.pdf and as part of the TEX installation.

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