Documentation

The powerdot class *

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Abstract

powerdot is a presentation class for LaTeX that allows for the quick and easy development of professional presentations. It comes with many tools that enhance presentations and aid the presenter. Examples are automatic overlays, personal notes and a handout mode. To view a presentation, DVI, PS or PDF output can be used. A powerful template system is available to easily develop new styles. A LyX layout file is provided.

Contents

*This class can be downloaded from the CTAN mirrors: `/macros/latex/contrib/powerdot`. See `powerdot.tex` for information on installing powerdot into your LaTeX distribution and for the license of this class.
This documentation prepared by Herbert Voß

powerdot

1 Introduction

This class gives you the possibility to easily create professionally looking slides. The class is designed to make the development of presentations as simple as possible so that you can concentrate on the actual content instead of keeping yourself busy with technical details. Of course, some knowledge of LaTeX is still required though.

This class builds on and extends the prosper class [9] and the HA-prosper package [1]. The HA-prosper package was initially intended to extend prosper and correct some bugs and problems of that class. As developments on that package progressed, it was found that unfortunately, not all of the problems could be overcome with the package. That discovery was the start of a new project set up to make a new class to replace the prosper plus HA-prosper combination. You're currently reading the result of that project.

The remainder of this section will be devoted to giving a feel of what the powerdot presentation source looks like and giving an overview of this documentation.

The document structure of a presentation is always the same. You can find it in the example below.

```
\documentclass[<class options>]{powerdot}
\pdsetup{<presentation options>}
\begin{document}
  \begin{slide}{a slide}
    Contents of the slide.
  \end{slide}
  \section{first section}
  \begin{slide}[<slide options>]{another slide}
    Contents of the slide.
  \end{slide}
  \begin{note}{personal note}
    The note.
  \end{note}
\end{document}
```

There are several elements that define the document structure. First of all, the class accepts some class options that control the output of the class, for instance, paper type and style. These class options will be discussed in section 2.1. Then there are presentation specific options which control some of the elements of the presentation globally, for instance, the footers. These will be discussed in section 2.2.

Once the setup has been decided on, you can use the slide environment to produce slides (see section 3) and the note environment to produce notes that go with the slides (see section 6.1). You can use overlays to display material in steps. This is described in section 4. The `\section` command provides a way to structure your presentation. This is discussed in section 5. Section 7 will show an overview of the styles that come with this class and the characteristics of each style. Section 8 will tell you more about how to produce output. This section contains important information on required packages.

Section 9 is mostly interesting for people that want to develop their own style for this class or want to modify an existing style. Section 10 explains how LyX [6] can be used to create powerdot presentations. This documentation concludes with a section devoted to questions (section 11), like 'Where can I find examples?'. It also tells you where to turn to in case your questions are still not solved.

2 Setting up the presentation

This section will describe all options that are available to control the output of the presentation and the looks of it.

2.1 Document class options

We will start with the class options that are typed in the `\documentclass` command as a comma-separated list. For each option, the preset value[1] will be mentioned in the description. This is the value that will be used if you decide to not give a value to the option or not use the option at all.

option `mode`

This options controls the kind of output that we want to produce. The preset value is `present`.

`mode=present`

This mode is used when you want to create the actual presentation. It will enable overlays and transition effects. You can read more about overlays in section 4.

`mode=print`

This mode can be used when printing the slides including their visual markup, but without any overlay or transition effects.

`mode=handout`

This mode will produce a black and white overview of your slides that can be used to make personal notes on, for distribution to students, a personal guide during your talk, etcetera.

option `nohandoutpagebreaks`

`nohandoutpagebreaks`

By default, the handout mode produces a document with two slides per page. If you want to fit more slides on a page, specify this option in the `\documentclass` command and powerdot will let LaTeX decide on the places to insert a page break, namely when a page is full.

option `nohandoutframes`

`nohandoutframes`

In handout mode, each slide is contained in a frame by default. This option turns the frames off.

option `paper`

This option has three possible values. The preset value is `screen`.

`paper=screen`

This is a special format with screen optimized ratio (4/3). The actual page dimensions will be 8.25 inch by 11 inch. This paper format is not available for print or handout mode. In these modes, powerdot will switch to a4 paper and put a warning that it did this in the log file of your presentation.

`paper=a4paper`

A4 paper will be used for the presentation or handout.

`paper=letterpaper`

Letter size paper will be used.

[1] The value that will be used when you don't use the option.

`paper=smartboard`

smartboard size will be used (`papersize={900pt,1440pt}`).

Some important information with respect to paper size, compiling and viewing presentations is available in section 8.

option `orient` This controls the orientation of the presentation. The preset value is `landscape`.

`orient=landscape`

The presentation will be in landscape format. This value is not available in handout mode. In that mode, powerdot will switch to portrait orientation and will warn you about this in the log file.

`orient=portrait`

This produces slides in portrait format. Notice that not all styles support portrait orientation. Please refer to section 7 for information about which styles do support the portrait orientation.

option `display` This controls the production of slides and notes. The preset value is `slides`.

`display=slides`

This will only typeset the slides in your presentation.

`display=slidesnotes`

This will typeset both the slides and the notes in your presentation. See also section 6.1 for more information about notes.

`display=notes`

This will typeset the notes only.

Here are some more options to control the output.

option `size` `size`

This is the size of the normal text font in points. Possible values are 8pt, 9pt, 10pt, 11pt, 12pt, 14pt, 17pt and 20pt and the preset value is 11pt.[2]

option `style` `style`

This controls the style to be loaded for the presentation. By default, the default style will be loaded. For more styles, see section 7.

option `fleqn` `fleqn`

This option makes equations flushed left. It does the same as the equally named option for the article class.

option `leqno` `leqno`

Put equation numbers at the left. Also the same as in the article class.

option `nopsheader` `nopsheader`

By default, powerdot will write a postscript command to the ps file to make

[2] Note that sizes other than 10pt, 11pt and 12pt are non-standard and it is assumed that you have the extsizes bundle [11] installed, which provides these sizes.

sure that post processors like ps2pdf know which paper to use without the need to specify it on the command line. See also section 8. If you experience problems with post processing or printing or you want to specify the paper size in the post processing steps yourself, use this option.

option `hlentries`

`hlentries`

This highlights table of contents entries when the entry matches with the current slide and its preset value is `true`. See also section 5. If you don't want highlighting of table of contents entries (for instance in print mode), use `hlentries=false`.

option `hlsections`

`hlsections`

This highlights table of contents sections when the section matches with the current section in the presentation and is preset to `false`. See also section 5. Specifying this option turns highlighting of sections on. This could be useful when you are using a style that implements a split table of contents.

option `pauseslide`

`pauseslide`

This option inserts an empty slide (black by default) in the presentation on page 1 and will automatically advance to page 2 when opening the presentation in a PDF viewer like Acrobat (Reader). The option also inserts a link behind every slide or section title that brings you to the pause slide when clicked. When you click anywhere in the pause slide, you will go back to the originating slide. This option can be used to temporarily pause a presentation, for instance, to do a proof on the black board. You can use a different color than black by specifying it after the option, for instance, `pauseslide=white`.

options `clock`

`clock`

This displays a small digital clock on slides which you can use to check the time left for your presentation.

Here is an example of a `\documentclass` command.

```
\documentclass[
  size=12pt,
  paper=screen,
  mode=present,
  display=slidesnotes,
  style=tycja,
  nohandoutpagebreaks,
  pauseslide,
  fleqn
]{powerdot}
```

This example sets up a presentation in tycja style, with a black slide, normal size 12 points and flushed left equations.

```
\documentclass[
  size=12pt,
  paper=letterpaper,
  mode=handout,
  display=slidesnotes,
  style=tycja,
  nohandoutpagebreaks,
  pauseslide,
  fleqn
]{powerdot}
```

Changing the paper and mode options, now produces a handout with possibly more than two slides per page due to the nohandoutpagebreaks option.

2.2 Setup options

\pdsetup

There are several extra options that can help customizing your presentation. These options are not available via the \documentclass command. This has a technical reason.[3] We distinguish two types of options. Options that can only be set globally (acting for the entire presentation) using the \pdsetup command and options that can be accessed both globally (via \pdsetup) and locally (via slide environments, see section 3).

2.2.1 Global options

This section describes options that can only be used globally in the preamble of your presentation via the \pdsetup command.

option palette

palette

This specifies the palette to be used. A palette is a set of colors defined by a style. To find out which palettes are defined by each style, see section 7.

option theslide

theslide

This option controls how the slide number appears on the slide. This is preset to the value \arabic{slide}~/~\pageref*{lastslide}, which could appear like 5/22. Notice that the \arabic{slide} typesets the number of the current slide and that \pageref*{lastslide} typesets the number of the last slide.[4]

option thenote

thenote

This is similar to the theslide option, but typesets the slide numbers of notes. The preset value is note~\arabic{note}~of~slide~\arabic{slide} and \arabic{note} here typesets the number of the current note that goes with the current slide. This could appear like note 2 of slide 7.

option counters

counters

The counters option lists counters that you might want to protect on overlays. As material on overlays (see section 4) is processed multiple times, also LaTeX counters, like the equation counter, might be increased too often. To avoid that your equations get different numbers on every overlay, use this option. The equation, table, figure, footnote and mpfootnote counters are already protected for you. If you use extra counters, for instance for theorems, list them in this option. Example:

```
counters={theorem,lemma}
```

option list

list

This option takes a list of options that will be passed on to the enumitem package that controls the layout of lists created by the enumerate and itemize environments. Example:

[3] The interested reader is referred to the section about the xkvltxp package in the xkeyval package documentation [2].

[4] We use the starred version of \pageref which is defined by hyperref and does not create a link to the page that it is referring to.

```
list={labelsep=1em,leftmargin=*,itemsep=0pt,topsep=5pt,parsep=0pt}
```

See for more information on controlling the layout of lists the enumitem package [4].

options `enumerate` `itemize`

enumerate
itemize

As the `list` option, but only control `enumerate` and `itemize` environments respectively.

option `clockformat`

clockformat

This option specifies the format of the clock. The format is set using Acrobat's `util.printd` function.[5] The default value is `HH:MM:ss`, which shows a 00-23 hour, 00-59 minute, 00-59 second clock. Example:

```
lockformat=h:MM tt
```

The above setting will display a 1-12 hour, 00-59 minute, am/pm clock. That is, the clock might show `5:53 pm`.

option `clockrefresh`

clockrefresh

This option should be a number which specifies how often the clock is refreshed in milliseconds. The default behavior is to refresh the clock every second. Thus, the default value is 1000. Notice, if the `clockformat` is such that seconds are not shown, then it makes no sense to update that clock every second. A corresponding example:

```
lockrefresh=60000
```

The interpretation of this is that the clock will be updated every minute.

2.2.2 Global and local options

This section describes options that can be used both globally via `\pdsetup` and locally via slide environments (see section 3).

options `lf` `cf` `rf`

lf
cf
rf

This determines the content of the left, center and right footers. These are preset to empty.

option `trans`

trans

This option sets the default transition effect to be used in the presentation. These transition effects only work after compiling the presentation to PDF format. See also section 8. The following transition effects are supported: `Split`, `Blinds`, `Box`, `Wipe`, `Dissolve`, `Glitter` and `Replace`. When you are using a viewer that understands PDF 1.5, you can also use `Fly`, `Push`, `Cover`, `Uncover` or `Fade`. It is important to notice that most viewers are case sensitive, so, for instance, `box` will not work.

The preset effect is `Replace` which just replaces one slide with another when browsing the slides. Note that some PDF viewers (like Acrobat Reader 5 and higher) only produce the transition effect in full screen mode. If you want to use a custom transition effect that is not listed in

[5] For a complete listing of allowable formats, consult the *Acrobat JavaScript Scripting Reference*[13].

the list above (for instance, a wipe effect with a custom wipe direction), then that is possible. However, powerdot will put a warning in your log file that the effect that you have chosen, might not work in the PDF viewer. Here is an example that does work.

```
trans=Wipe /Di 0
```

In Acrobat (Reader), this wipes from left to right instead of the default top to bottom. For more information, see a PDF Reference Manual.

option `method`

`method`

This option can be used when a slide contains special material that does not get treated in the 'usual' way by LaTeX. Verbatim material is an example of this. Possible values are `normal` (the preset value), `direct` and `file`. We will come back to this option in detail in section 6.4.

options `logohook` `logopos` `logocmd`

`logohook`
`logopos`
`logocmd`

If `logopos` is specified, a logo defined by the value of the `logocmd` option will be put on slides. The position can be specified relative to the width and height of the slide. `{0,0}` is the lower left corner of the paper and `{\slidewidth,\slideheight}` is the upper right corner. For positioning the logo, the `\rput` command of pstricks [16, 17] is used. This command also allows to specify the point of the logo that should be positioned there. This point can be entered via the `logohook` option and can take the values `tl`, `t`, `tr`, `r`, `Br`, `br`, `b`, `bl`, `Bl`, `l`, `B` and `c`. For more information about `\rput`, consult the pstricks documentation. Here is an example that integrates the flower of the default style into the husky style.

```
\documentclass[style=husky]{powerdot}
\pdsetup{
  logohook=t,
  logopos={.088\slidewidth,.99\slideheight},
  logocmd={\includegraphics[height=.08\slideheight]{powerdot-default.ps}}
}
\begin{document}
...
\end{document}
```

The preset value for `logohook` is `tl`.

A special feature of powerdot, which can be used to make presentations come alive, is the use of random dots. These dots will be placed anywhere on your slides and use the colors defined by the palette that you use. Overlays will carry the same dots. This feature uses `random.tex` [3]. Several options are available to control the appearance of the random dots.

option `randomdots`

`randomdots`

By default, random dots are turned off. If this option is set to `true`, random dots will be generated. `false` will turn off the feature. When no value is submitted to the option, `true` will be used.

options `dmindots` `dmaxdots`

`dmindots`
`dmaxdots`

The number of dots per slide is also random. These options set the minimum and maximum dots per slide. Preset values are `5` and `40`, respectively.

options `dminsize` `dmaxsize`

`dminsize`
`dmaxsize`

The minimum and maximum radius of the dots. Preset values are `5pt` and `40pt`, respectively.

options `dminwidth` `dmaxwidth` `dminheight` `dmaxheight`

`dminwidth`
`dmaxwidth`
`dminheight`
`dmaxheight`

These options determine the area on the slide that can be used for the random dots. These values are preset such that dots go anywhere on the slide, but you might want to adjust these such that, for instance, dots can only appear in the text area. The preset values are `0pt`, `\slidewidth`, `0pt`, `\slideheight`.

Here is an example that allows dots in a smaller rectangle on the slide.

```
\pdsetup{
  dminwidth=.1\slidewidth,dmaxwidth=.9\slidewidth,
  dminheight=.2\slideheight,dmaxheight=.8\slideheight
}
```

option `dbright`

`dbright`

This option can be used to adjust the brightness of the dots. The number should be an integer between -100 and 100. If the number is negative, the color will be adjusted towards black, with -100 giving black. If the number is positive, the color will be adjusted towards white, with 100 giving white. With a light background, you may want to choose `bright` to be positive. With a dark background, you may want to set it negative. The preset value is `60`, meaning a mixture of 40% of the original color and 60% white.

option `dprop`

`dprop`

This option is used for passing extra parameters to the `\psdot` command, which creates the random dots. You could, for instance, change the style of the dots or the line width. See for more information about `\psdot` the pstricks documentation [16, 17]. powerdot defines two extra dot styles that can be used for the random dots. These styles are `ocircle` (open circle) and `osquare` (open square).

Here are two examples for the use of random dots.

```
\pdsetup{
  randomdots,dminwidth=.2\slidewidth
}
```

This turns on random dots and doesn't use the left 20% of the slide for placing random dots.

```
\pdsetup{
  randomdots,dprop={dotstyle=ocircle,linewidth=.5pt},
  dminsize=500pt,dmaxsize=600pt,dmindots=2,dmaxdots=5
}
```

This example puts at most 5 big circles on slides. These circles do not fit on the slides and you will only see parts of them in the shape of curves.

2.2.3 `\pdsetup` example

Here is an example of a `\pdsetup` command that one could use to set up the presentation.

```
\pdsetup{
  lf=My first presentation,
  rf=For some conference,
  trans=Wipe,
  theslide=\arabic{slide},
  randomdots,dmaxdots=80
}
```

This sets the left and right footers and will initialize the transition effect to `Wipe`. Further, slide numbers will not include the number of the last slide, but only the number of the current slide. Finally, slides will be covered with at most 80 random dots.

A small note is necessary with respect to the appearance of footers. The slide number (controlled by the `theslide` option) will be added to a footer. Most styles add it too the right footer. If both the footer and the slide number are non empty, `~--~` will be inserted in between them to separate them. Styles might modify this default behavior however.

3 Making slides

3.1 The title slide

\title
\author
\and
\date
\maketitle

The title slide is created by the `\maketitle` command.

```
\maketitle[⟨options⟩]
```

Its use is the same as in the standard LaTeX document classes. The optional argument ⟨*options*⟩ can contain any option from section 2.2.2. Specifying such an option in the `\maketitle` command will only have an effect on the title slide and not on other slides. See an example below.

```
\documentclass{powerdot}
  \title{Title}
  \author{You \and me}
  \date{October 7, 2010}
\begin{document}
   \maketitle
   ...
\end{document}
```

The `author`, `title` and `date` declarations provide the text to be used when making a title page. The design of the title page is specific to the style in use. Notice the use of `\and` for separating multiple authors. See a LaTeX manual [12] for more information on commands such as `\title` and `\author`.

3.2 Other slides

slide

The centerpiece of every presentation is the slide. In powerdot, the content of each slide is placed in a `slide` environment.

```
\begin{slide}[⟨options⟩]{⟨slide title⟩}
⟨body⟩
\end{slide}
```

In section 4 we'll see how to give some life to the slides, but for now, let's look at a simple example.

```
\begin{slide}{First slide}
  Hello World.
\end{slide}
```

The slide environment has one required argument, namely the slide title. When a slide is created, the slide title is used to create an entry in the table of contents and in the list of bookmarks. The table of contents is a listing of the slides and section titles in the presentation that appears on each slide.

The table of contents is clickable (when the presentation is compiled into PDF) and serves as a nice way to jump from location to location within the presentation. The bookmark list is only present when compilation is taken all the way to the PDF file format. It also serves as a table of contents, but this list does not appear on *any* of the slides, but in a separate window in a PDF viewer. In the example above, the entries in both table contents and the list of bookmarks would be titled `First slide`.

The ⟨*options*⟩ for the `slide` environment can contain any option listed in section 2.2.2. Additionally, the following options can be used.

option `toc`

When specified, the value is used for the entry in the table of contents; otherwise, the slide title is used. If `toc=` is specified, then no entry is created.

option `bm`

When specified, the value is used for the bookmark entry; otherwise, the slide title is used. If `bm=` is specified, then no entry is created.

These optional arguments are especially useful when the title of a slide is extremely long or when the title contains LaTeX commands that do not render correctly in the bookmarks.[6] When specifying entries, be sure to hide special characters ',' and '=' between curly brackets '{' and '}'. Let's look at an example that uses these optional arguments.

```
\begin{slide}[toc=,bm={LaTeX, i*i=-1}]{\color{red}\LaTeX, $i^2=-1$}
  My slide contents.
\end{slide}
```

In this example, the slide title will appear as LaTeX, $i^2 = -1$. This text will not render correctly in a bookmark entry. An attempt is made to correct this, but often, the correction does not produce an equivalent text. This particular title would be rendered in the bookmark list as `redLaTeX, i2=-1`. On the other hand, the manually specified bookmark entry is rendered as: `LaTeX, i*i=-1`. Notice, no entry is created in the table of contents, because of the use of `toc=`.

In addition to the `slide` environment, each individual style can define its own environments. Many styles have a `wideslide` environment. The idea is that one might have information that does not fit nicely on a slide with a table of contents listed, as this consumes some space. In such cases, it is preferable to use a slide that does not list the table of contents. The `wideslide` environment provides this functionality and has more space for the actual slide content. See section 7 for information on the various environments provided by the styles.

4 Overlays

It is often the case that you don't want all the information on the slide to appear at once. Rather, the information should appear one item at a time. In powerdot, this is achieved with overlays. Each slide can be comprised of many overlays, and the overlays are displayed one at a time.

[6] The bookmarking procedure uses `\pdfstringdef` from the hyperref package, and it can process accented characters such as `\"i`.

4.1 The \pause command

\pause The easiest way to display information sequentially is to use the \pause command.

\pause[⟨*number*⟩]

Below is a simple example:

```
\begin{slide}{Simple overlay}
  power\pause dot
\end{slide}
```

The slide's information is displayed and continues until the \pause command is encountered. No further output within the same slide is displayed until the click of the mouse or the touch of the keyboard. Then, the content will continue to display until all the information is displayed or until another \pause command is encountered. In this example, power is displayed on the first overlay, and powerdot is the displayed on the second overlay. The \pause command is often used within the itemize and enumerate environments. For example,

```
\begin{slide}{Multiple pauses}
  power\pause dot \pause
  \begin{itemize}
    \item Let me pause\ldots \pause
    \item \ldots while I talk \pause and chew bubble gum. \pause
    \item Perhaps you'll be persuaded.
    \item Perhaps not.
  \end{itemize}
\end{slide}
```

Since \pause was used before the itemize environment, no item will appear until the third overlay. Then, each item will be displayed one at a time, each on their own overlay. More information on using lists will follow in the next section.

The optional argument of the \pause command specifies the number of overlays to pause. An example usage is:

```
\begin{slide}{Pause longer}
  \begin{itemize}
    \item A \pause
    \item B \pause[2]
    \item C
  \end{itemize}
\end{slide}
```

In the example above, item C will appear on the fourth overlay. The usefulness of this option will become more apparent in the next section; so we will revisit a similar example at that time.

4.2 List environments

The list environments, itemize and enumerate, have special treatments in powerdot. They have an optional argument that will be taken care off by the enumitem package (see [4]). powerdot supplies an extra key for this optional argument. In the examples that follow, features will be described using the itemize environment but they also apply to the enumerate environment.

Here is the typical usage of the itemize environment:

```
\begin{slide}{Basic itemize}
  \begin{itemize}
    \item A \pause
    \item B \pause
```

```
    \item C
  \end{itemize}
\end{slide}
```

The display is simple, each item appears one at a time with each overlay.

option type

Suppose we wanted every item to show, but we only wanted one item to appear 'active' at once. This can be accomplished via the `type` option for the `itemize` environment. The preset value is `0`.

```
\begin{slide}{Type 1 itemize}
  \begin{itemize}[type=1]
    \item A \pause
    \item B \pause
    \item C
  \end{itemize}
\end{slide}
```

Now, every item will be displayed in the *inactive color* (which is defined by the style that you use), and the item's font color will become the active one on the overlay that it would normally appear on. The default behavior is given by `type=0`.

Lists can also be nested to create complicated structures. When a list is nested, it inherits the setting of the `type` option from the 'parent' list, but that can be overruled by specifying the `type` option in the optional argument of the nested list. We present here one example, but many more can be created by nesting lists of different types in different ways.

```
\begin{slide}{Nested lists}
  \begin{itemize}
    \item A\pause
    \begin{itemize}[type=1]
      \item B\pause
    \end{itemize}
    \item C
  \end{itemize}
\end{slide}
```

This displays `A` and `B` on the first overlay, but `B` is inactive. On overlay 2, `B` will become active and on overlay 3, `C` will become visible.

4.3 The `\item` command

`\item`

The `\item` command has an extra *optional* argument in powerdot which allows for creating overlays in a more flexible way then `\pause` provides.

`\item[`⟨*label*⟩`]<`⟨*overlays*⟩`>`

This optional argument should contain an overlay specification stating on which overlays you want the item to appear. This specification is a comma separated list where each item can used the notation as in table 1. The ⟨*label*⟩ argument is the standard optional argument for `\item` in LaTeX. A LaTeX manual [12] can tell you more about this argument.

Syntax	Meaning
`x`	Only overlay `x`
`-x`	All overlays up to and including `x`
`x-`	All overlays from `x`, including `x`
`x-y`	All overlays from `x` to `y`, including `x` and `y`

Table 1: `\item` and `\onslide` notation

Here is an example.

```
\begin{slide}{Active itemize}
  \begin{itemize}[type=1]
   \item<1> A
   \item<2> B
   \item<3> C
  \end{itemize}
\end{slide}
```

Here we have said that `A` should only be active on overlay 1, `B` should only be active on overlay 2, and `C` should only be active on overlay 3. Again, when the item is not active, it appears in the inactive color because of `type=1`.

If `type=0` is specified and if each item is given an overlay option, then each item will appear only when it is active. When the item is not active, then it will not show on the slide at all. More examples demonstrating the syntax for ⟨*overlays*⟩ will be discussed in the next section.

4.4 The `\onslide` command

`\onslide` Overlays can also be achieved using the `\onslide` command.

`\onslide{`⟨*overlays*⟩`}{`⟨*text*⟩`}`

This command takes an ⟨*overlays*⟩ specification as first argument and the ⟨*text*⟩ to apply it to as second argument. The ⟨*overlays*⟩ on which the text will appear are specified as a comma separated list with syntax as in table 1. We start off with a simple example.

```
\begin{slide}{Simple onslide}
  \onslide{1,2}{power}\onslide{2}{dot}
\end{slide}
```

We have instructed `power` to appear on overlays one and two, and `dot` to appear only on overlay two. As you might guess, this example has the same output as our first `\pause` example. Yet, it is clearly the case that our syntax is more complicated. However, this slight "complication" also allows for much more flexibility.

`\onslide+` Consider the above example with the following modifications:

```
\begin{slide}{Simple onslide+}
 \texttt{onslide }: \onslide{1}{power}\onslide{2}{dot}\\
 \texttt{onslide+}: \onslide+{1}{power}\onslide+{2}{dot}
\end{slide}
```

The `\onslide+` command displays its content in a different manner altogether. Now, `dot` appears on every overlay, but it is in inactive color and matches the normal font color *only* on overlay two. This is comparable to the `type=1` behavior for lists (see section 4.2).

When executing this example, we will also notice that the `\onslide` command does hide material, but still reserves the right amount of space for it: on overlay 2, the `dots` appear right above each other. The next command does not reserve space.

`\onslide*` Instead of hiding and reserving space (`\onslide`) or putting ⟨*text*⟩ in the inactive color (`\onslide+`) when the overlay doesn't match ⟨*overlays*⟩, this command just eats the material altogether. To understand the differences, consider the following example:

```
\begin{slide}{Simple onslide*}
 \texttt{onslide }: \onslide{1}{power}\onslide{2}{dot}\\
 \texttt{onslide+}: \onslide+{1}{power}\onslide+{2}{dot}\\
 \texttt{onslide*}: \onslide*{1}{power}\onslide*{2}{dot}
\end{slide}
```

The output of the first two lines, we are already familiar with. The third line displays `power` on overlay 1 and `dot` on overlay 2, but no space for `power` is reserved on overlay 2. Hence `dot` will start on the cursor position that `power` started on overlay 1 and it is not aligned below the other two `dots`.

We finish with an example of the syntax that is possible with `\item` and `\onslide`. Remember that these commands take a comma separated list for the ⟨*overlays*⟩ specification and that each element can used the syntax as explained in table 1. The various variations are demonstrated in the example below.

```
\begin{slide}{Lists}
  \onslide{10}{on overlay 10 only}\par
  \onslide{-5}{on every overlay before and including overlay 5}\par
  \onslide{5-}{on every overlay after and including overlay 5}\par
  \onslide{2-5}{on overlays 2 through 5, inclusive}\par
  \onslide{-3,5-7,9-}{on every overlay except overlays 4 and 8}
\end{slide}
```

4.5 Relative overlays

Sometimes it is a pain to keep track of when an item should appear or become active. You might, for example, just care that some text appears on the overlay *after* some other item. This functionality is provided through the use of relative overlays which should not be used outside list environments that use `\item`. Let's consider a simple, illuminating example.

```
\begin{slide}{Relative overlays}
  \begin{itemize}
    \item A \pause
    \item B \onslide{+1}{(visible 1 overlay after B)}\pause
    \item C \onslide{+2-}{(appears 2 overlays after C, visible until the end)}
    \pause
    \item D \onslide{+1-6}{(appears 1 overlay after D, visible until overlay 6)}
    \pause
    \item E \pause
    \item F \pause
    \item G \onslide{+1-+3}{(appears 1 overlay after G for 3 overlays)}\pause
    \item H \pause
    \item I \pause
    \item J \pause
    \item K
  \End{itemize}
\end{slide}
```

As you can see, we still use `\onslide`. The only change is with the syntax of the list of overlays. Now, we can specify a '+' symbol in the list. In its simplest usage, `\onslide{+1}` will make text display one overlay after the overlay it would *normally* appear on. You can still use the syntax in table 1. These are demonstrated in the above example. Notice, `\onslide{+1-6}` means that the text will appear one overlay after the overlay it would normally appear on and that the text should remain shown until overlay seven. To make text appear for a range of relative overlays, see the final demonstration in the above example.

5 Presentation structure

5.1 Making sections

`\section` This section describes the `\section` command which provides a way to structure a presentation.

`\section[`⟨*options*⟩`]{`⟨*section title*⟩`}`

This command will produce a slide with ⟨*section title*⟩ on it and will also use this text to create sections in the table of contents and in the bookmarks list. There are several ⟨*options*⟩ to control its output.

option `tocsection`

This option controls the creation of a section in the table of contents. The preset value is `true`.

`tocsection=true`

This does create a section in the table of contents. This means that all following slides, until the next section, will be nested under this section.

`tocsection=false`

This does not create a section in the table of contents and hence the section will be listed as an ordinary slide.

`tocsection=hidden`

This does create a section in the table of contents, but this is only visible when you view a slide that is part of this section. This could be used to append a section to the presentation which you can discuss if there is some extra time.

option `slide`

This option controls whether the `\section` command creates a slide. The preset value is `true`.

`slide=true`

A slide is created.

`slide=false`

No slide will be created. If also `tocsection` is `false`, the `\section` command doesn't do anything. If it does create a table of contents section (`tocsection=` `true` or `hidden`), its link will point to the first slide in the section as the section itself doesn't have a slide.

option `template`

This option can be used to make the section slide with another template. By default, a normal `slide` environment is used to create the section slide, but if a style offers other templates that could be used for this purpose (for instance, the `wideslide` environment), then you can use this option to select that template. See section 7 for an overview of the available templates with every style.

Finally, all options available to normal slides are available to slides created by `\section` as well (see section 3). However, when the section does make a `tocsection`, `toc=` or `bm=` won't remove the table of contents entry or the bookmark respectively.

5.2 Making an overview

`\tableofcontents` This command creates an overview of your presentation and can only be used on a slide.

`\tableofcontents[`⟨*options*⟩`]`

There are several ⟨*options*⟩ to control the output of this command.

option `type`

This option controls whether certain material (depending on the input in the `content` option below) will be hidden or displayed in the inactive color. The preset value is `0`. Compare with the `type` option for list environments (section 4.2).

`type=0`

When material is not of the requested type as specified in the `content` option, it will be hidden.

`type=1`

As `type=0`, but instead of hiding material, it will be typeset in the inactive color.

option `content`

The `content` option controls which elements will be included in the overview. The preset value is `all`. The description below assumes that `type=0` was chosen, but the alternative text for `type=1` can easily be deduced.

`content=all`

This will display a full overview of your presentation including all sections and slides, except the slides in hidden sections (see section 5.1).

`content=sections`

This displays only the sections in the presentation.

`content=currentsection`

This displays the current section only.

`content=future`

This displays all content starting from the current slide.

`content=futuresections`

This displays all sections, starting from the current section.

We finish this section with a small example that will demonstrate how you can make a presentation that contains an overall overview of sections in the presentation, giving a general idea of the content, and per section a detailed overview of the slides in that section.

```
\begin{slide}[toc=,bm=]{Overview}
  \tableofcontents[content=sections]
\end{slide}
\section{First section}
\begin{slide}[toc=,bm=]{Overview of the first section}
  \tableofcontents[content=currentsection,type=1]
\end{slide}
\begin{slide}{Some slide}
\end{slide}
\section{Second section}
...
```

6 Miscellaneous

6.1 Notes

`note`

The `note` environment can be used to make personal notes that accompany a slide. You can control displaying notes using the `display` option (see section 2.1). Here is an example.

```
\begin{slide}{Chewing gum}
...
\end{slide}
\begin{note}{Reminder for chewing gum}
  Don't forget to mention that chewing gum is sticky.
\end{note}
```

6.2 Empty slides

emptyslide

The `emptyslide` environment creates a totally empty slide. The text box on the slide can be used for special things like displaying photos. This allows for creating a dia show. Example:

```
\begin{emptyslide}{}
  \centering
  \vspace{\stretch{1}}
  \includegraphics[height=0.8\slideheight]{me_chewing_gum.eps}
  \vspace{\stretch{1}}
\end{emptyslide}
```

The `\includegraphics` command is defined by the graphicx package [5]. The `\stretch` command is used to vertically center the picture. Both commands are described in your favorite LaTeX manual, for instance [12]. Note that you can use the lengths `\slideheight` and `\slidewidth` to scale pictures to fit nicely on the slide.

6.3 Bibliography slide

thebibliography

powerdot redefines the standard article `thebibliography` environment to suppress the creation of a section heading and running headers. All other properties are maintained. You can do either of the next two (depending whether you are using BiBTeX or not):

```
\begin{slide}{Slide}
  \cite{someone}
 \end{slide}
begin{slide}{References}
  \begin{thebibliography}{1}
  \bibitem{someone} Article of someone.
  \end{thebibliography}
\end{slide}
```

```
\begin{slide}{Slide}
  \cite{someone}
\end{slide}
\begin{slide}{References}
  \bibliographystyle{plain}
  \bibliography{YourBib}
\end{slide}
```

In case you have a big reference list that you want to spread over multiple slides, have a look at the packages natbib and bibentry [8]. Using both packages allows you to do:

```
\begin{slide}{References (1)}
  \bibliographystyle{plain}
  \nobibliography{YourBib}
  \bibentry{someone1}
  \bibentry{someone2}
\end{slide}
\begin{slide}{References (2)}
  \bibentry{someone3}
\end{slide}
```

Have a look at your favorite LaTeX manual for more information about citations and bibliographies.

6.4 Verbatim on slides

option `verbatim`

powerdot has three different methods of processing slides, from which two have mainly been developed to make the inclusion of verbatim content[7] on slides easier. These methods can be accessed by the `method` key which is available in slide environments and the `\pdsetup` command (see section 2.2.2).

`method=normal`

This is the preset method for processing slides. It is fast and allows for overlays, but it does not allow for verbatim.[8]

`method=direct`

This method is also fast, but does not allow for overlays. Overlays will silently be disabled. However, it does allow for verbatim content on slides.

`method=file`

This method uses a temporary file to export the slide body to and read it back in. This method does allow for verbatim content and overlays, but could be slow when many slides use this method because the filesystem is used.

Below is an example demonstrating the use of all three different methods of slide processing.

```
\documentclass{powerdot}
\usepackage{listings}
\lstnewenvironment{code}{
  \lstset{frame=single,escapeinside=‘’,
  backgroundcolor=\color{yellow!20},
  basicstyle=\footnotesize\ttfamily}
}{}
\begin{document}
\begin{slide}{Slide 1}
Normal \pause content.
\end{slide}
\begin{slide}[method=direct]{Slide 2}
Steps 1 and 2:
\begin{code}
compute a;‘\pause’
compute b;
\end{code}
\end{slide}
\begin{slide}[method=file]{Slide 3}
Steps 1 and 2:
\begin{code}
compute a;‘\pause’
compute b;
\end{code}
\end{slide}
\end{document}
```

The first slide shows the default behavior for normal content. It produces two overlays. The second slide does not produce overlays, despite the use of the `\pause` command. This command has been disabled by choosing the `direct` method to process the verbatim content. The third slide has the same body as the second slide, but now does create two overlays, because the method using a temporary file has been chosen. Notice that we used `\pause` inside the listing, but that it can also be used outside the listing.

[7] And other content that needs catcode changes when processing.

[8] Except when it has been saved in a box outside the slide.

6.5 The `\twocolumn` command

`\twocolumn` The `\twocolumn` macro allows to split content into two columns.

```
\twocolumn[⟨options⟩]{⟨left⟩}{⟨right⟩}
```

This typesets ⟨*left*⟩ and ⟨*right*⟩ in two columns. The dimensions of those columns can be controlled by ⟨*options*⟩. Below are the available options.

option `lineheight`

`lineheight`

If `lineheight` is specified, a line of the specified height will be created using `\psline` in between the two columns. Example: `lineheight=6cm`.

option `lineprop`

`lineprop`

Any pstricks declaration to specify the line properties. Example:

```
lineprop={linestyle=dotted,linewidth=3pt}
```

options `lfrheight` `lfrprop`

`lfrheight`
`lfrprop`

The first creates a frame of the specified height around the left column. The second is as `lineprop`, but for the left frame.

options `rfrheight` `rfrprop`

`rfrheight`
`rfrprop`

As `lfrheight` and `lfrprop`, but for the right frame.

options `lcolwidth` `rcolwidth`

`lcolwidth`
`rcolwidth`

Width of the left and right columns. Both are preset to: `0.47\linewidth`.

option `frsep`

`frsep`

Space between text and the frames. Preset: `1.5mm`.

option `colsep`

`colsep`

Space between the two columns. Preset: `0.06\linewidth`.

option `topsep`

`topsep`

The extra space (additional to `\baselineskip`) between text above the columns and the text within the columns. Preset: `0cm`.

option `bottomsep`

`bottomsep`

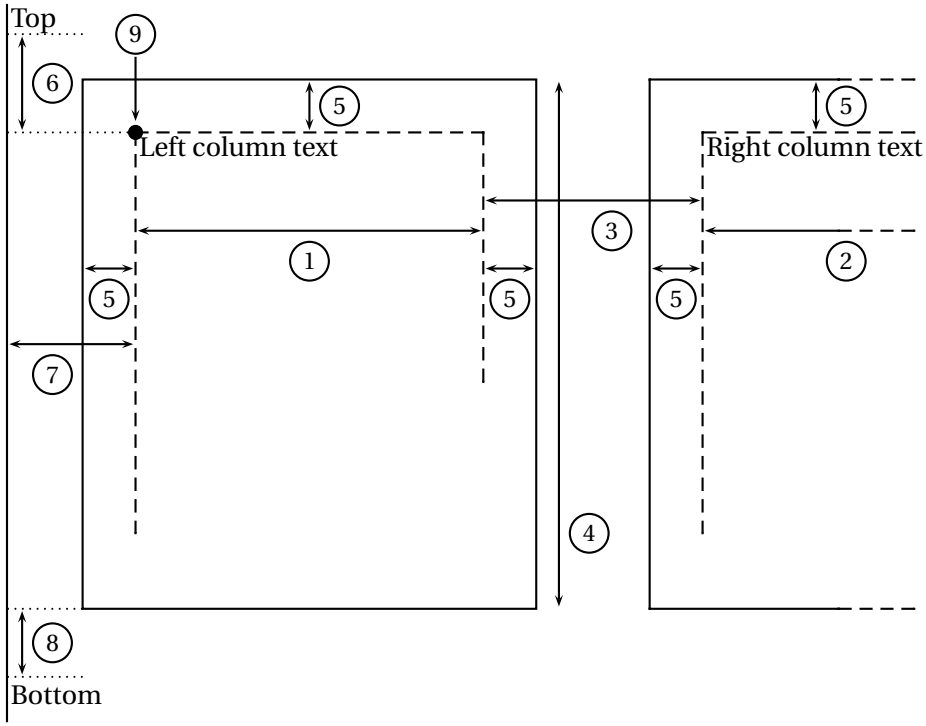
Idem for the bottom of the columns. Preset: `0cm`.

option `indent`

`indent`

Horizontal indent left to the left column. Preset: `0cm`.

The dimensions described above are represented graphically in figure 1. Important to notice is that the `\twocolumn` macro uses the current cursor position as the reference point to position the first line of text of the left column (see also figure 1). This means that optional frames can extend to the text on the previous line. Use for instance `topsep=0.3cm` in that case to add extra space between the two lines of text. The preset value of `topsep` is based on the situation that there is no text on top of the two columns. In that case, it is best to locate the first line of text of the left column at the same spot as text that is not created



Meaning of the labels

1	`lcolwidth`	5	`frsep`
2	`rcolwidth`	6	`topsep`
3	`colsep`	7	`indent`
4	`lfrheight`, `rfrheight`, `lineheight`	8	`bottomsep`
		9	Reference point

Figure 1: Two-column dimensions.

by `\twocolumn` on other slides. The setting `topsep=0cm` does exactly this. However, with a combination of `topsep` and `indent` you can change this behavior and position the first line of text of the left column anywhere you want.

The `\twocolumn` macro computes the height of the construction to position text below the construction correctly. The computation is done by taking the maximum height of `lfrheight`, `rfrheight`, `lineheight` (if specified) and the left and right column content. Hence when frames nor a line is requested, `bottomsep` is the vertical space between the lowest line of text in the columns and the text below the columns (additional to `\baselineskip`). Here is an example.

```
\begin{slide}{Two columns}
  Here are two columns.
  \twocolumn[
    lfrprop={linestyle=dotted,linewidth=3pt},
    lfrheight=4cm,rfrheight=5cm,lineheight=3cm,topsep=0.3cm
  ]{left}{right}
  Those were two columns.
\end{slide}
```

Note that the use of the xkeyval commands `\savevalue` and `\usevalue` could be handy here, for instance for copying the properties of the left frame to the right frame. This avoids typing them twice and avoids making errors resulting in different frames. See an example below.

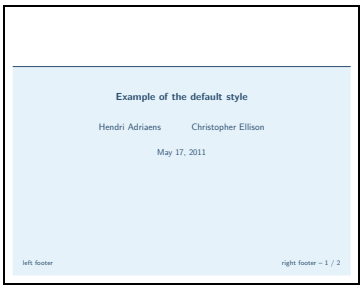
```
\twocolumn[
  \savevalue{lfrheight}=3cm,
  \savevalue{lfrprop}={
    linestyle=dotted,framearc=.2,linewidth=3pt},
  rfrheight=\usevalue{lfrheight},
  rfrprop=\usevalue{lfrprop}
]{left}{right}
```

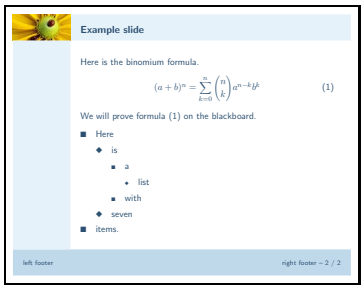
See the xkeyval documentation [2] for more information about `\savevalue` and `\usevalue`.

7 Available styles

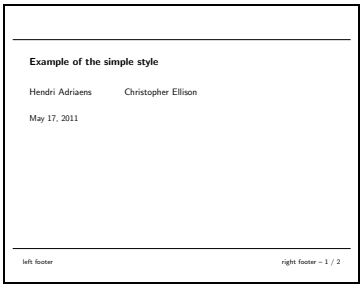
powerdot comes with a number of styles which are listed in the overview below. The characteristics of each style are described shortly and a sample of a title slide and a normal slide is provided for each style. Styles support the `wideslide` environment, have a table of contents on the left part of the paper in landscape orientation and on the bottom part in portrait orientation and support portrait orientation unless states otherwise.

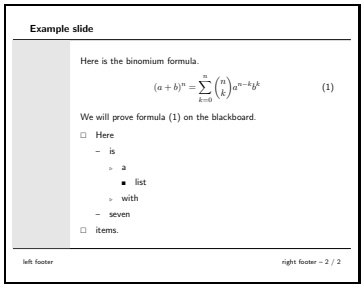
default
: This style provides six different palettes. A flower in the top left corner decorates the slides for all palettes. The default palette is `blue` which has as main colors light blue and white. You can see an example of that palette below. Other available palettes are `red`, `green`, `yellow`, `brown` and `purple`.



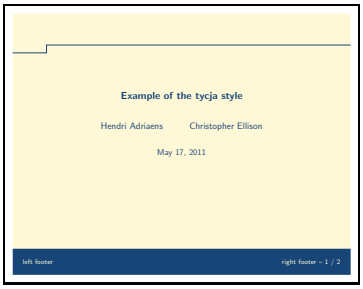


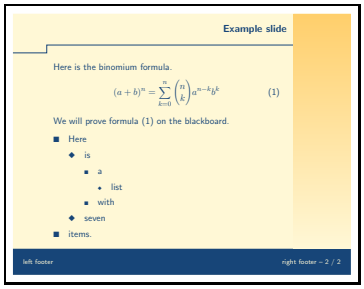
simple
: This is a simple style in black and white. This style could be useful if you want to print your slides.





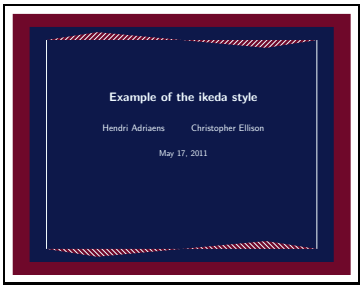
tycja
: This style is set in shades of yellow and dark blue. The table of contents on slides is on the right side of the paper in landscape orientation and on the bottom part in portrait.

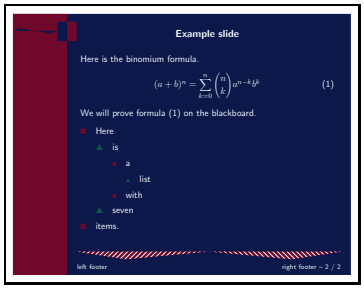




ikeda

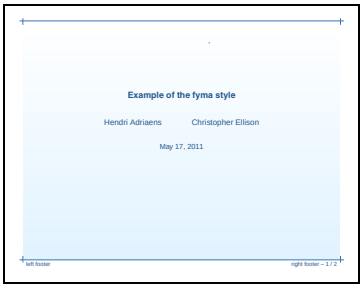
This style uses dark shades of red and blue and a light text color. It has nice patterns on the slide for decoration.

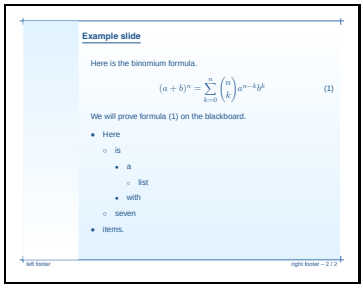




fyma

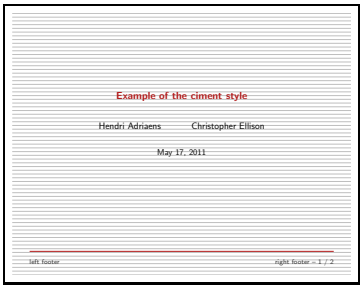
This style was originally created by Laurent Jacques for prosper. Based on that style, he created a version for HA-prosper with extended features. With his kind permission, this style has been converted by Shun'ichi J. Amano for powerdot. The style has an elegant design with a light blue and white gradient background in the default `blue` palette. Other available palettes are `green`, `gray`, `brown` and `orange`. It has special templates for sections on slides and sections on wide slides. Below is a sample of the blue palette.

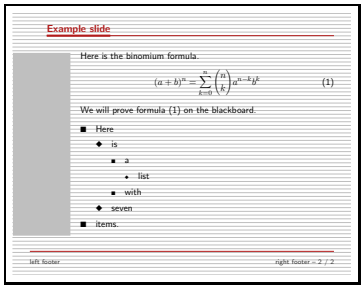




ciment

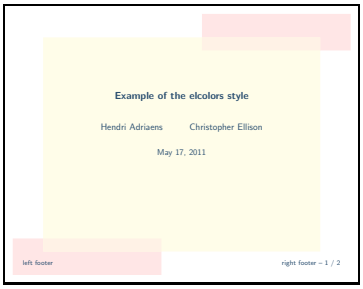
This style was originally created by Mathieu Goutelle for prosper and HA-prosper. With his kind permission, this style has been converted for powerdot. The style has a background that is hatched with light gray horizontal lines. Titles and table of contents highlighting are done with dark red.

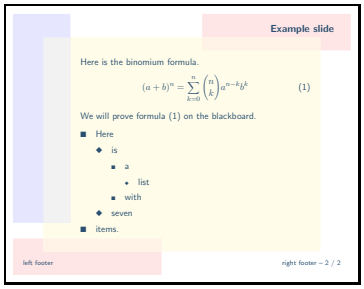




elcolors

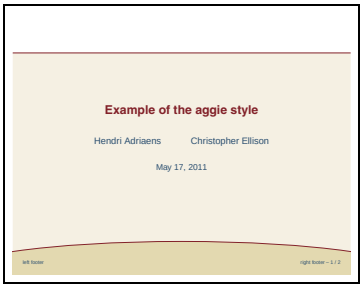
This is a style using light shades of the elementary colors red, blue and yellow.

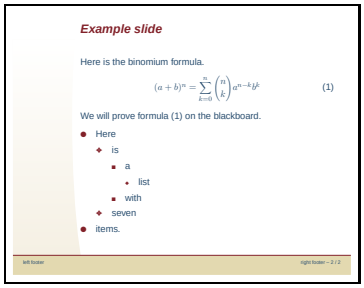




aggie

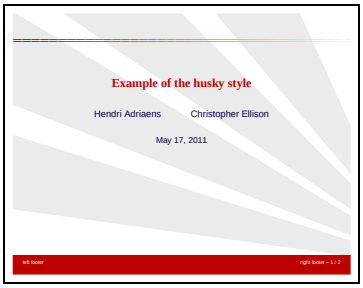
This style was created by Jack Stalnaker for HA-prosper and he has converted this style for powerdot. The style uses dark red and light brown colors.

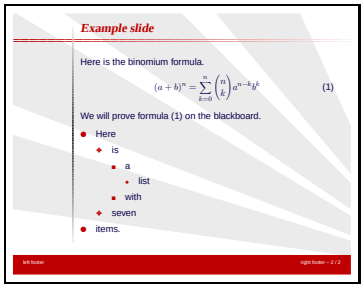




husky

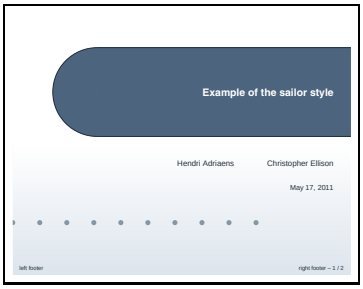
This style is created by Jack Stalnaker and has a background of light gray sun beams combined with dark red highlights.

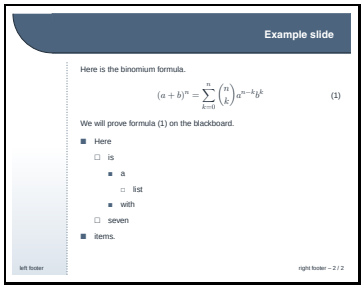




sailor

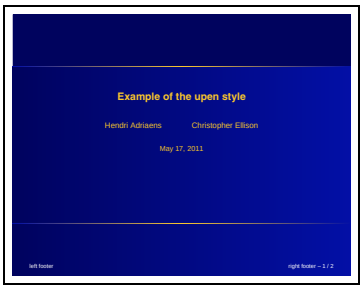
This style is contributed by Mael Hilléreau and supplies five different palettes: `Sea` (the default), `River`, `Wine`, `Chocolate` and `Cocktail`. Below is a sample of the palette `Sea`.

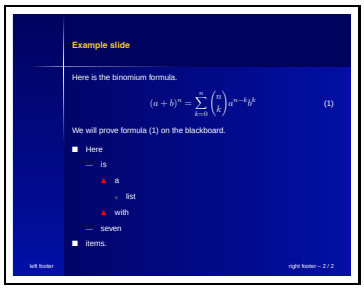




upen

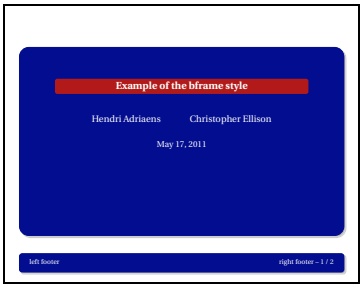
This style has a nice dark blue background and text in yellow. It is contributed by Piskala Upendran.

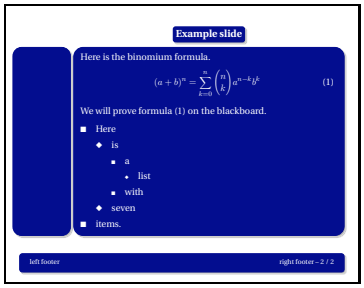




bframe

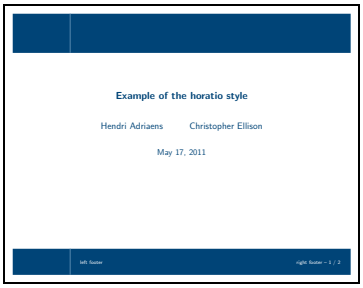
The bframe style has blue frames on the slide in which text is positioned. The style is contributed by Piskala Upendran.

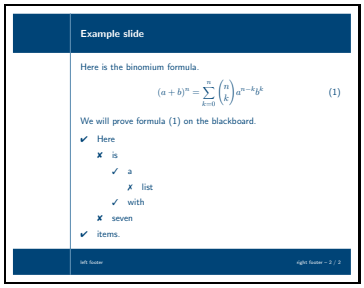




horatio

The horatio style has been contributed by Michael Lundholm and is a more conservative blue style.



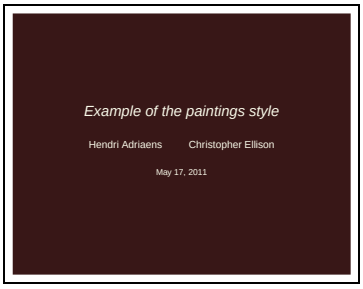


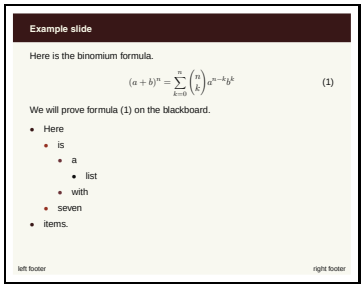
paintings

This is a simple style without a table of contents on slides. It has been contributed by Thomas Koepsell and provides 10 different palettes. The colors used in the palettes are drawn from famous paintings.[9] If you are

[9] The style defines a color `pdcolor7` which is not used in the style but comes from the same painting and complements the other colors. It can be used, for example, to highlight text against the main background color.

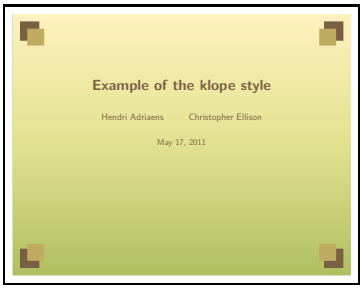
interested, open the style file to read which paintings have been used. The available palettes are: `Syndics` (the default), `Skater`, `GoldenGate`, `Lamentation`, `HolyWood`, `Europa`, `Moitessier`, `MayThird`, `PearlEarring` and `Charon` (all case sensitive). Below is a sample of the `Syndics` palette.

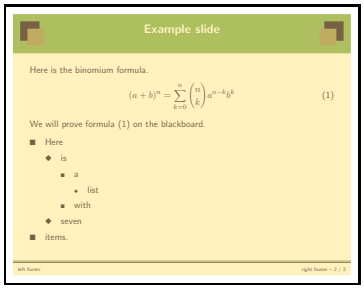




klope

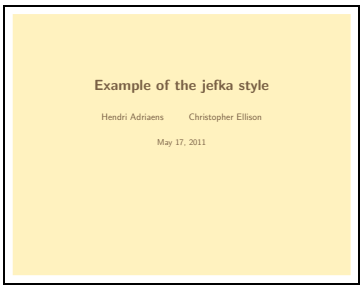
The klope style implements a horizontal table of contents that only lists the sections. The style is available in the following palettes: `Spring`, `PastelFlower`, `BlueWater` and `BlackWhite`. The `Spring` palette is the default and you can see a sample of that below.

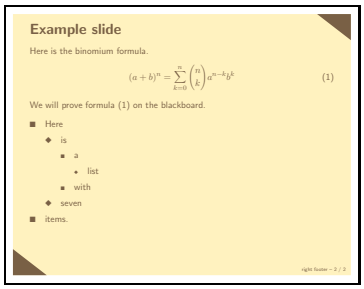




jefka

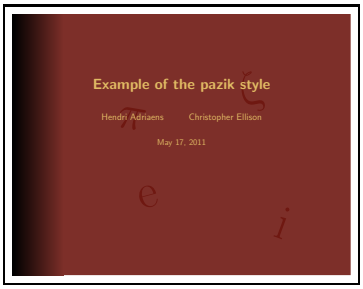
The jefka style comes with four palettes: `brown` (the default), `seagreen`, `blue` and `white`. Below you see a sample of the `brown` palette.

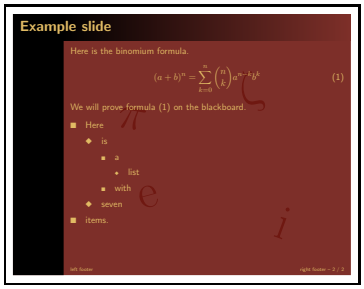




pazik

This style is available in two palettes: `red` and `brown`. Below is a sample of the default `red` palette.





8 Compiling your presentation

8.1 Dependencies

In table 2 is a list of packages that powerdot uses to perform specific tasks. Dependencies of packages in this table are not listed. In the table, 'required' means that you should have a version *at least* as new as listed and 'tested' means that powerdot was tested with this version, but that it could equally well work with an older or newer version than the one listed in the table. So, when trying to solve an error, first concentrate on solving version issues for the 'required' packages. To find out which version of a package you are currently using, put `\listfiles` on the first line of your document, run it with LaTeX, open the `.log` file and read the file list (see a LaTeX manual for more information). If you need to update a package, you can get it from CTAN [7].

Package/file	Version	Date	Required/tested
xkeyval [2]	2.5c	2005/07/10	required
`pstricks.sty` [16, 17]	0.2l	2004/05/12	required
xcolor [10]	1.11	2004/05/09	required
enumitem [4]	1.0	2004/07/19	required
article class	1.4f	2004/02/16	tested
geometry [15]	5.x	2010/10/07	tested
hyperref [14]	6.74m	2003/11/30	tested
graphicx [5]	1.0f	1999/02/16	tested
verbatim	1.5q	2003/08/22	tested

Table 2: Dependencies

8.2 Creating and viewing output

To compile your presentation, run it with LaTeX. The DVI that is produced this way can be viewed with MiKTeX's DVI viewer YAP.[10] Unfortunately, xdvi and kdvi (kile) do not support all PostScript specials and hence these will display the presentation incorrectly. If your DVI viewer does support this, make sure that your DVI display settings match that of the presentation. In case you are using the `screen` paper, you should set the DVI display setting to using the letter paper format. If your DVI viewer allows for custom paper formats, use 8.25 inch by 11 inch.

Note that certain things that are produced with PostScript or PDF techniques will not work in a DVI viewer. Examples are hiding of material via postscript layers (as is done, for instance, by `\pause`, see section 4) and hyperlinks, for instance in the table of contents.

If you want to produce a postscript document, run dvips over the DVI *without any particular command line options related to orientation or paper size*. powerdot will write information to the DVI file that helps dvips and ps2pdf (ghostscript) to create a proper document. If you have some reason that this does not work for you and you want to specify the paper and orientation yourself, you should use the `nopsheader` option that is described in section 2. The PostScript document could, for instance, be used to put multiple slides on a page using the `psnup` utility.

To create a PDF document for your presentation, run ps2pdf over the PS file created with dvips. Also here, you can *leave out any command line arguments*

[10] Unless you are using pstricks-add which distorts the coordinate system in DVI.

related to paper size or orientation. If this is problematic for you somehow, use the `nopsheader` option as before and specify the paper and orientation at each intermediate step yourself.

9 Creating your own style

9.1 General information

Writing or customizing powerdot styles is simple. If you want to modify a style or build a new one, locate the style that you want to use as basis in your TEX tree (styles are named as `powerdot-<style_name>.sty`), copy that and rename it as to avoid license[11] or naming conflicts. You might want to install the new style in your local TEX tree to be able to access it from any place on your hard drive. See your LATEX distribution for more information.

Once that has been taken care of, we can start creating the style. We strongly recommend to study a style file (for example, `powerdot-default.sty`) while reading the remainder of this section as it provides good examples for the content of this section.

A style has several components. We describe these components below.

Identification and packages
This identifies the package in the log of a presentation and loads all required packages. The default style contains something like:

```
\NeedsTeXFormat{LaTeX2e}[1995/12/01]
\ProvidesPackage{powerdot-default}[2005/10/09 v1.2 default style (HA)]
\RequirePackage{pifont}
```

See for more information about these commands a LATEX manual, for instance [12].

Palette or color definitions
This section contains the definitions of palettes or colors that you want to use in the style. powerdot uses xcolor (via pstricks). Hence, for more information about colors, see the xcolor documentation. We will discuss palettes in more detail in section 9.2.

Template definitions
We will come back to this in sections 9.3 to 9.9.

Custom declarations
These can include anything that you want to be part of the style. The default style, for instance, includes definitions for the labels in list environments like `itemize` and some initializations for lists in general (done with `\pdsetup`, see section 2.2). This part could also include some customizations as described in section 9.10.

Font initializations
This initializes font definitions (which can be done by loading a package like helvet).

[11] The LATEX Public Project License requires renaming files when modifying them, see `http://www.latex-project.org/lppl`.

9.2 Defining palettes

We will be defining templates formally in section 9.3. For now, it's enough to have the general idea that a template controls the design of a slide. Palettes are sets of colors that color a template or design. A palette does not change the overall design of a template.

\pddefinepalettes The following command can be used to define palettes for your style.

```
\pddefinepalettes{⟨name1⟩}{⟨cmds1⟩}...
```

This macro takes *any* even number of mandatory arguments with a minimum of two. For every ⟨*name*⟩, a set of ⟨*commands*⟩ can be given which define the palette with name ⟨*name*⟩. These commands can define colors with names `pdcolor1`, `pdcolor2`, etcetera. These colors can be used when designing the template (see section 9.3). `pdcolor1` will always be used as text color.

The user can access these palettes via the `palette` key for the `\pdsetup` command (see section 2.2). If the user does not specify a palette, the first palette defined when compiling the presentation, will be used. Here is an example for defining 2 palettes.

```
\pddefinepalettes{reds}{
  \definecolor{pdcolor1}{rgb}{1,0,0}
  \definecolor{pdcolor2}{rgb}{1,.1,0}
  \definecolor{pdcolor3}{rgb}{1,.2,0}
}{greens}{
  \definecolor{pdcolor1}{rgb}{0,1,0}
  \definecolor{pdcolor2}{rgb}{.1,1,0}
  \definecolor{pdcolor3}{rgb}{.2,1,0}
}
```

In this example, the `reds` palette is the default one. For more information about `\definecolor`, see the documentation of the xcolor package [10].

Notice that it is not necessary to use the names `pdcolor2`, `pdcolor3` etcetera as color names. But if these colors are defined, powerdot will use them, for instance, in the random dots feature (see section 2.2.2). The flexibility adds extra possibilities in setting up templates and palettes. See for an example of its use, the klope style.

9.3 Defining templates

We start off with a definition of what a template is. A template is a collection of settings for slide components together with custom definitions, which controls the visual appearance of a slide. A style can contain multiple templates.

```
\pddefinetemplate[⟨basis⟩]{⟨name⟩}{⟨options⟩}{⟨commands⟩}
```

\pddefinetemplate This defines the environment ⟨*name*⟩ to produce a slide with characteristics determined by ⟨*basis*⟩, ⟨*options*⟩ and ⟨*commands*⟩. We will discuss these elements in more detail in the coming sections.

If you want to create several templates that differ only slightly from each other, define a ⟨*basis*⟩ template, and then use it to define other templates. All ⟨*options*⟩ and ⟨*commands*⟩ for the new template ⟨*name*⟩ will be appended to the existing list of ⟨*options*⟩ and ⟨*commands*⟩ from the ⟨*basis*⟩ template.

Make sure you choose a *proper* name for the template, and avoid redefining existing templates or environments. powerdot defines `pauseslide`, `note` and `emptyslide` internally, so you shouldn't use these names unless you know what you're doing. Furthermore, each style needs to define at least the templates `slide` and `titleslide`. The `titleslide` environment will be used to create the title slide and `slide` will (by default) also be used to create section slides.

Titles and sections are a bit special in the way they use the ⟨*options*⟩ and will be discussed in more detail in section 9.10.

9.4 Controlling setup

option
`ifsetup`

The ⟨*options*⟩ (keys) are described in the following sections. You can control how these options apply to the various setups by using the `ifsetup` key. Any key appearing before the first `ifsetup` declaration in ⟨*options*⟩ will apply to every possible setup. Once the `ifsetup` key is used, then all subsequent key declarations will apply *only* to the setups declared in the `ifsetup` key. The `ifsetup` key can be used multiple times.

By possible setups, we mean the allowed values of the `mode`, `paper`, `orient`, and `display` keys that are described in section 2.1. If a value (or values!) for any of these four keys is not specified in a `ifsetup` declaration, then all subsequent key declarations will apply to any layout of that type. Consider the following as an example.

```
...
textpos={.2\slidewidth,.3\slideheight},
ifsetup={portrait,screen},
textpos={.3\slidewidth,.2\slideheight}
...
ifsetup=landscape,
...
ifsetup,
...
```

Assuming there was no `ifsetup` declaration before the first `textpos` declaration, this first `textpos` will apply to every possible setup. However, for the screen format in portrait orientation, the next `textpos` declaration will be used. In fact, all declarations that appear until we switch to the next `ifsetup` (which specifies all paper sorts and only landscape orientation) will be used in the portrait screen layout. All keys after the next `ifsetup` declaration will be used in landscape orientation, *with any paper, mode and display*. If, after declaring some specializations, you want to switch back to settings that apply to all possible setups, set `ifsetup` to empty as is done in the example. All subsequent declarations will then again be applied under any setup.

The following command is a stand-alone implementation of the mechanism described above. It allows you to control the setup outside the ⟨*options*⟩ argument of the `\pddefinetemplate` command.

`\pdifsetup{`⟨*desired*⟩`}{`⟨*true*⟩`}{`⟨*false*⟩`}`

`\pdifsetup`

This macro executes ⟨*true*⟩ when the setup that the user chose matches with the ⟨*desired*⟩ setup, ⟨*false*⟩ in all other cases. For instance, if the user has chosen landscape, then

```
\pdifsetup{landscape}{yes}{no}
```

will typeset `yes`. If the user would have chosen portrait instead, then `no` would have been typeset.

This macro can be used to check setup requests from the user and, for instance, generate an error if a certain setup is not supported by your style. powerdot provides one predefined error message which can be used in one of the first lines of your style.

```
\pd@noportrait
```

\pd@noportrait This macro generates an error when the user requests portrait orientation. Notice that the handout mode only works in portrait orientation. This macro takes that into account and doesn't generate an error in the case that the user requested a handout.

9.5 Main components

The ⟨*options*⟩ control several key components of a slide. Every component has several properties. A key that can be used in the ⟨*options*⟩ argument is the name of the component postfixed by its property that you want to control.

The components `title`, `text`, `toc`, `stoc` and `ntoc` have properties `hook`, `pos`, `width` and `font`. Additionally, the `text` component has a `height` property. The components `lf`, `cf` and `rf` have properties `hook`, `pos`, `temp` and `font`. Hence, examples of valid keys are `titlefont`, `tocpos` and `lftemp`. All components and properties will be discussed below.

Here is an overview of the components that can be controlled from the ⟨*options*⟩ argument in `\pddefinetemplate`.

option `title-`

The slide title.

option `text-`

The main text box on the slide.

option `toc-`

The (full) table of contents on a slide containing sections and slides.

option `stoc-`

This is a table of contents containing only the sections. See also `ntoc` below.

option `ntoc-`

This is a table of contents containing only the entries for the active section. Together with `stoc`, this can be used to create a split table of contents. In a particular template, one would usually have a `toc`, a combination of `stoc` and `ntoc` or no table of contents at all.

options `lf-` `cf-` `rf-`

The left, center and right footers.

Notice that all positioning of components described above will be done with `\rput` from pstricks [16, 17] internally. See the pstricks documentation for more information about this command. It should also be noted that all components (except `lf`, `cf` and `rf`) put their content in a `minipage` environment.

Now we list all properties of the components listed above and describe what they mean. Remember that keys are formed by combining a component name and a property.

option `-hook`

This option defines the `\rput` hook that will be used when positioning the item. This can be `tl`, `t`, `tr`, `r`, `Br`, `br`, `b`, `bl`, `Bl`, `l`, `B` and `c`. See the pstricks documentation for more information.

option `-pos`

`-pos`

This defines the position of the `hook` on the paper. The lower left corner of the paper is given by the point `{0,0}` and the upper right corner by the point `{\slidewidth,\slideheight}`. So if you want to position the main text box at 20% from the left edge and 30% from the top edge of the paper, you have to do the following.

```
textpos={.2\slidewidth,.7\slideheight}
```

If the position of any component has not been specified, this component will not be placed on the slide. This gives an opportunity to design slides without footers or table of contents, for instance.

option `-width`

`-width`

The width of the component. All component positioned by powerdot will be put in a surrounding `minipage` environment. The `width` property determines the width of the `minipage`. Example:

```
textwidth=.7\slidewidth
```

This property does not exist for the `lf`, `cf` and `rf` components.

option `-height`

`-height`

This option is only available for the `text` component. In other words, for this property, there is only one key, namely `textheight`. This can be used to specify the height of the `minipage` used for the main text. This does not imply that users are restricted to this length or that powerdot does automatic slide breaking. This height is only used for vertical alignments of material, for instance by footnotes. The preset value is `\slideheight`.

option `-font`

`-font`

This will be inserted just before the text that is about to be typeset. This can be used to declare deviations from the main text font and color. It can be a font declaration, like `\large\bfseries`, but can also contain other things like `\color{red}` or `\raggedright`.

option `-temp`

`-temp`

This property is only available for the footers (`lf`, `cf` and `rf`) and can be used to change the template of the footers. This means that you can, for instance, add content to the footer, besides the content specified by the user. The default declaration by powerdot is the following.

```
rftemp=\pd@@rf\ifx\pd@@rf\@empty
  \else\ifx\theslide\@empty\else\ -- \fi\fi\theslide
```

Here `\pd@@rf` will contain the content of the right footer defined by the user via the `\pdsetup` command. Similarly, `\pd@@lf` contains the content of the left footer. The above declaration checks whether the footer and `\theslide` are both non-empty and if so, it inserts `--` to separate both.

option `-orient`

`-orient`

This property is only available for the `toc`, `stoc` and `ntoc` components. This property can be `h` or `v` and determines the orientation of the table of contents. The preset is `v`. See also section 9.6 for more information about the construction of the table of contents.

9.6 Slide toc

The small table of contents that is placed on slides can be controlled by four macros and several options.

\pd@tocslide
\pd@tocsection

These macros take one argument. When building the table of contents, powerdot first passes the content through `\pd@tocslide` or `\pd@tocsection`, depending on the type of entry that it is building at that moment. You could, for instance, do

```
\def\pd@tocslide#1{$\bullet$\ #1}
\def\pd@tocsection#1{#1}
```

which will prefix all normal entries (not the sections) with a bullet. By default, these two macros are defined to just pass on their argument.

\pd@tocdisplay
\pd@tochighlight

These two macros also take one argument. After processing an entry with the command `\pd@tocslide` or `\pd@tocsection`, powerdot continues building the entry by passing it through `\pd@tocdisplay`, when the entry needs to be displayed only, or `\pd@tochighlight`, when the entry needs to be highlighted. These macros are a little more involved and take care of putting the content in the proper font and color in a `minipage`. Further, `\pd@tochighlight` also puts a box around the item.

Notice, that by default, both the separate table of contents entries as well as the table of contents as a whole are typeset in `minipage` environments by these macros, in case the table of contents is vertical. The `-width` properties then determines the width of the table of contents and, together with `tocsecindent` and `tocslideindent` (see below) the width of the individual entries. If it is horizontal, only the separate entries will be in `minipages` and the table of contents itself not and the `-width` properties determine only the width of the individual entries (together with `tocsecindent` and `tocslideindent`).

Several aspects of the process of generating the table of contents can be controlled via the keys that are available in the `\pddefinetemplate` command that will be described below. If these keys do not provide enough handles to do what you want, you might need to have a look at the two macros in the source and decide to rewrite them in your style as to fit your needs. An example can be found in the fyma style.

option `tocfrsep`

`tocfrsep`

This length is the distance between the box around the content created by the `minipage` and the highlight frame box created by `\pd@tochighlight`. Preset: `0.5mm`.

option `tocsecsep`

`tocsecsep`

The distance inserted before a section (unless it is the first element in the table of contents). Preset: `2ex`. Notice that if the orientation of the table of contents is set to vertical, this length creates a vertical skip, otherwise, it creates a horizontal skip.

option `tocslidesep`

`tocslidesep`

The distance inserted before other entries (unless it is the first element in the table of contents). Preset: `0ex`. Like `tocsecsep`, the effect of this length depends on the orientation of the table of contents.

option `tocsecindent`

`tocsecindent`

The horizontal space left to a section entry. Preset: `0pt`.

option `tocslideindent`

`tocslideindent`

The horizontal space left to a slide entry. The horizontal skip will not be inserted left to slide entries that appear before the first section. Preset: `0pt`.

option `tocsecm`

`tocsecm`

This is inserted just before typesetting a section. This can be used to mark a section, for instance with a line as in the default style. Preset: empty.

option `toctcolor`

`toctcolor`

This is the text color used for non-highlighted elements in the table of contents. Preset: `black`.

option `tochltcolor`

`tochltcolor`

This is the text color used for highlighted elements in the table of contents. Preset: `white`.

option `tochlcolor`

`tochlcolor`

This is the color used for the frame behind highlighted elements. Preset: `black`.

9.7 Miscellaneous options

There are some options that fall outside of the scope of the previous sections. These will be discussed here.

option `iacolor`

`iacolor`

The `iacolor` option can be used to specify the color that is used for inactive things, produced for instance by `\onslide`, `\pause` (see section 4) and `\tableofcontents` (see section 5.2). As xcolor is used by powerdot, one can use special notation here, like

```
iacolor=black!20
```

The preset value for this key is `lightgray`.

The following options control the digital clock (see section 2.1). The clock is a form text field with dynamic content, driven by a javascript via hyperref text fields. Some options for the clock work similarly as for, for instance, the title component, but there are also special options.

options `clockhook` `clockpos`

`clockhook`
`clockpos`

These work in the same way as the `-hook` and `-pos` properties discussed in section 9.5. The preset value of `clockhook` is `tr`.

options `clockwidth` `clockheight`

`clockwidth`
`clockheight`

These control the width and height of the text field containing the clock. Preset values come from hyperref and are `3cm` and `\baselineskip`, respectively.

option `clockcharsize`

`clockcharsize`

The size of characters of the clock. Preset: `14pt`.

option `clockalign`

`clockalign`

The alignment of the clock in the text field. `0` is left-aligned, `1` is centered and `2` is right aligned. Preset is `2`.

option `clockcolor`

`clockcolor`

This determines the text color of the clock. The value should be a named color. The preset value is `black`.

9.8 Template presets

Below, we have copied the preset setting for the keys described above. These will be used if you didn't supply other input for these keys in a particular template. If the preset value meets your needs, you don't have to specify it again in your style.

```
titlehook=Bl,titlepos=,titlewidth=\slidewidth,
titlefont=\raggedright,texthook=tl,textpos=,
textwidth=\slidewidth,textfont=\raggedright,
textheight=\slideheight,
tochook=tl,tocpos=,tocwidth=.2\slidewidth,
tocfont=\tiny\raggedright,
stochook=tl,stocpos=,stocwidth=.2\slidewidth,
stocfont=\tiny\raggedright,
ntochook=tl,ntocpos=,ntocwidth=.2\slidewidth,
ntocfont=\tiny\raggedright,
tocorient=v,stocorient=v,ntocorient=v,
tocfrsep=.5mm,tocsecsep=2ex,tocslidesep=0ex,
tocsecm=,toctcolor=black,tochlcolor=black,tochltcolor=white,
tocsecindent=0pt,tocslideindent=0pt,
lfhook=Bl,lfpos=,lffont=\scriptsize,lftemp=\pd@@lf,
cfhook=B,cfpos=,cffont=\scriptsize,cftemp=\pd@@cf,
rfhook=Br,rfpos=,rffont=\scriptsize,rftemp=\pd@@rf\ifx\pd@@rf
  \@empty\else\ifx\theslide\@empty\else\ -- \fi\fi\theslide,
iacolor=lightgray,
clockhook=tr,clockpos=,clockwidth=3cm,clockheight=\baselineskip,
clockcharsize=14pt,clockalign=2,clockcolor=black
```

9.9 The background

This leaves only one argument of the `\pddefinetemplate` macro undiscussed. This is the ⟨*commands*⟩ argument. This argument can contain any code that you want to execute *after* setting the options and *before* building the slide components like the slide title, main text, and footers. This argument is designed to contain declarations that will build the background of a template using, for instance, pstricks, but it can also hold other commands you might need for building your template.

Important to notice is that these commands may not create TEX material as that might destroy the construction of the slide. So, if you want to place the word 'Hello' in the bottom left corner of the slide, don't type 'Hello', but make its width, height and depth equal to zero, for instance by using pstricks' `\rput`.

```
\rput[bl](0,0){Hello}
```

9.10 Title slide, titles and sections

As mentioned before, the style that you write needs to define at least the templates `slide` and `titleslide`. The latter treats some of the keys in a special way. Besides, a section slide is also done in a special way.

The title slide (made with `\maketitle`) puts the title with author(s) and date in the main text box. This means that you have to supply a position for the main text box (`textpos`). It will use the main text font for the text (together with declarations in the `textfont` key) for the author(s) and the date. But it will use the declarations in `titlefont` for the title of the presentation. This is done so that title and author(s) form a coherent block and to make sure that long titles can push down the author(s) instead of overwriting it.

`\pd@slidetitle` The `\pd@slidetitle` macro is used to typeset the slide title on slides. This macro is comparable to for instance `\pd@tocslide`. The macro takes one argument which is the slide title in the right font and formatting. By default, this macro just passes on the content for typesetting, but you could redefine this macro so do something with its input prior to typesetting it. An example is in the fyma style which underlines the title after putting it in a `minipage` to support multi line titles.

`\pd@title` `\pd@sectiontitle` These macros are similar to `\pd@slidetitle` and typeset the title on the title slide and the title on section slides respectively. By default, these also pass there argument (which is the presentation title or section title), but these can be redefined to do something with the input prior to typesetting it, just as `\pd@slidetitle`.

options

`sectemp` `widesectemp` The `\section` command uses (by default) the `slide` environment and puts the section title in the title box with font `titlefont`. If you want to change the default use of the `slide` environment for sections to, for instance, the `sectionslide` environment or any other especially designed section template, change the section template preset in your style, using

```
\setkeys[pd]{section}{sectemp=sectionslide}
```

This means that if the user asks for `template=slide` in the `\section` command, the `sectionslide` environment will be used silently. To avoid surprises, `sectionslide` should preferably be based on the `slide` environment.

A similar option is available in case the user asks for `template=wideslide`. One could for instance do the following.

```
\setkeys[pd]{section}{widesectemp=sectionwideslide}
```

Whenever the user requests a `wideslide` to be used for a `\section`, instead, the `sectionwideslide` environment will be used. Other input to the `template` key by the user does not get a special treatment.

Notice that these keys are available in the `section` family of keys and that you cannot use them in the `\pddefinetemplate` command.

9.11 Testing the style

powerdot has a test file that should test most of the style. This test file can be produced by running LaTeX over `powerdot.dtx`. This generates `powerdot-styletest.tex` which will help you with the testing job. Feel free to contact us when you would like to contribute your style to powerdot. See also section 11.

10 Using LyX for presentations

LyX [6] is a WYSIWYM (What You See Is What You Mean) document processor based on LaTeX. It supports standard LaTeX classes but needs special files, called layout files, in order to support non-standard classes such as powerdot.

To start using LyX for powerdot presentations, copy the layout file `powerdot.layout` to the LyX layout directory. You can find this file in the doc tree of your LaTeX installation: `texmf/doc/latex/powerdot`. If you can't find it there, download it

from CTAN:/macros/latex/contrib/powerdot. Once that is done, reconfigure LyX (Edit ▷ Reconfigure and restart LyX afterwards). Now you can use the powerdot document class as any other supported class. Go to Layout ▷ Document and select powerdot presentation as document class. For more information, see the LyX documentation, which is accessible from the Help menu.

10.1 How to use the layout

The powerdot LyX layout provides some environments[12] which can be used in LyX. Some of these environments (for instance Title or Itemize) are natural to use since they exist also in the standard document classes such as article. For more information on these standard environments, see the LyX documentation.

This section will explain how to use the powerdot specific environments Slide, WideSlide, EmptySlide and Note. These environments correspond to the powerdot environments slide, emptyslide, wideslide and note.

We start with a simple example. The following LaTeX code

```
\begin{slide}{Slide title}
  Slide content.
\end{slide}
```

can be obtained using the following LyX environments. The right column represents the text typed into the LyX window and the left column represents the environment applied to this text).

```
Slide       Slide title
Standard    Slide content.
EndSlide
```

Some remarks concerning this example.

- You can use the environment menu (under the menu bar, top-left corner) to change the environment applied to text.
- The slide title should be typed on the line of the Slide environment.
- EndSlide finishes the slide and its line is left blank.

In the LyX window, the Slide environment (that is, the slide title) is displayed in magenta, the WideSlide style in green, the EmptySlide style in cyan and the Note style in red and hence these are easily identifiable.

Here is another example.

```
\begin{slide}{First slide title}
  The first slide.
\end{slide}
\begin{note}{First note title}
  The first note, concerning slide 1.
\end{note}
\begin{slide}{Second slide title}
  The second slide.
\end{slide}
```

This can be done in LyX in the following way.

```
Slide       First slide title
Standard    The first slide.
Note        First note title
Standard    The first note, concerning slide 1.
Slide       Second slide title
Standard    The second slide.
EndSlide
```

[12] Don't confuse these with LaTeX environments.

This example demonstrates that it is often sufficient to insert the `EndSlide` style after the last slide or note only. Only when you want certain material not to be part of a slide, you need to finish the preceding slide manually using the `EndSlide` style. Example:

```
Slide       First slide title
Standard    The first slide.
EndSlide
[ERT box with some material]
Slide       Second slide title
...
```

Options can be passed to slide environments by using `Insert` ▷ `Short title` in front of the slide title. The following example uses the `direct` method (see section 6.4) in the short title argument (delimited by square brackets) to allow for a `lstlisting` environment (defined by the listings package) within the slide content.

```
Slide       [method=direct]Example of LaTeX source code
Standard    Here's the \HelloWorld command:
[ERT box:
  \lstset{language=[LaTeX]TeX}
  \begin{lstlisting}
  \newcommand{\HelloWorld}{Hello World!}
  \end{lstlisting}
]
EndSlide
```

Note that you are not obliged to use a `verbatim` environment to type the `\HelloWord` text into the LyX window because LyX directly supports standard verbatim.[13] Consequently, the use of the slide processing methods `direct` and `file` is not necessary when you need standard verbatim, but it is necessary when doing more advanced things, like in the example above.

10.2 Support of syntax

This section lists options, commands and environments that are supported through the LyX interface directly, without using an ERT box (TeX-mode).

All class options (see section 2.1) are supported via the `Layout` ▷ `Document` dialog (`Layout` pane). Options for the `\pdsetup` command (see section 2) should be specified in the `Preamble` pane of the `Layout` ▷ `Document` dialog.

Table 3 lists the powerdot commands that are supported in LyX. Table 4 lists the powerdot environments that, besides the earlier discussed `slide`, `wideslide`, `note` and `emptyslide` environments, are supported in LyX. Table 5 lists commands that can only be done by using an ERT box (via `Insert` ▷ `TeX`). Note that you may use the clipboard in order to repeat often used commands like `\pause`. Finally, table 6 lists additional commands and environments that are supported by the layout.

10.3 Compiling with LyX

First of all, make sure that you have also read section 8. Then, in order to get a proper PostScript or PDF file, you have to set your LyX document properties depending on which paper and orientation you want. When your LyX document is open, go to the `Layout` ▷ `Document` dialog. In the `Layout` pane, put the

[13] LyX translates special characters into their corresponding LaTeX command. For instance, the backslash character is translated into `\textbackslash`. Resulting, the font is not the same as in true verbatim and you might want to change that via the `Layout` ▷ `Character` dialog.

Command	Method in LyX
\title	Use Title environment.
\author	Use Author environment.
\date	Use Date environment.
\maketitle	Managed directly by LyX.
\section	Use the Section environment. Options to this command (see section 5.1) can be specified using Insert ▷ Short title in front of the section title.
\tableofcontents	Use Insert ▷ Lists & TOC ▷ Table of contents. You will need an ERT box if you want to use the optional argument, see below.

Table 3: Supported powerdot commands in LyX

Environment	Method in LyX
itemize	Use Itemize and ItemizeType1 environments. The latter will create a list with type=1 (see section 4.2).
enumerate	Use Enumerate and EnumerateType1 environments.
thebibliography	Use Bibliography environment.

Table 4: Supported powerdot environments in LyX

nopsheader, orient and paper keys as class options (see section 2.1 for a description). Then, go to the Paper pane and select corresponding paper size and orientation (you may choose letter paper in the case you set paper=screen in the class options). Finally, go to the View (or File ▷ Export) menu and select your output (PostScript or PDF).

10.4 Extending the layout

If you have created a custom style (see section 9) which defines custom templates, you may want to extend the layout file[14] so that these templates are also supported in LyX. The explanation below assumes that you have defined a template called sunnyslide.

To support this new template in LyX, you have to use the following command.

\pddefinelyxtemplate⟨*cs*⟩{⟨*template*⟩}

\pddefinelyxtemplate

This will define the control sequence ⟨*cs*⟩ such that it will create a slide with template ⟨*template*⟩ (which has been defined using \pddefinetemplate. This new control sequence can be used in the layout file as follows.

```
# SunnySlide environment definition
Style SunnySlide
  CopyStyle    Slide
  LatexName    lyxend\lyxsunnyslide
  Font
    Color      Yellow
  EndFont
  Preamble
    \pddefinelyxtemplate\lyxsunnyslide{sunnyslide}
  EndPreamble
End
```

[14] The LPPL dictates to rename a file if you modify it as to avoid confusion.

Command	Method in LyX
\and	Within Author environment.
\pause	
\item	An ERT box is only required for the optional argument, not mandatory for overlays specifications.
\onslide	And the versions \onslide+ and \onslide*.
\twocolumn	
\tableofcontents	Only when using the optional argument.

Table 5: powerdot commands needing an ERT box in LyX

Env./Command	Method in LyX
quote	Use Quote environment.
quotation	Use Quotation environment.
verse	Use Verse environment.
\caption	Use Caption environment within standard float environments.

Table 6: Additional environments for LyX

Note that you must begin the LatexName field with lyxend. The definition of the LyX template has been inserted in between Preamble and EndPreamble which assures that the new LyX environment will work in every presentation. After modifying the layout file, don't forget to restart LyX. See for more information about creating LyX environments, the documentation of LyX in the Help menu.

11 Questions

11.1 Frequently Asked Questions

This section is devoted to Frequently Asked Questions. Please read it carefully; your problem might be solved by this section.

Q1 Does powerdot have example files? Where can I find them?
A1 powerdot comes with several examples that should be in the doc tree of your LaTeX installation. More precisely: texmf/doc/latex/powerdot. If you can't find them there, download them from CTAN:/macros/latex/contrib/powerdot [7].

Q2 I'm getting errors or unexpected output when compiling the simplest example!
A2 Did you read section 8?

Q3 I made a typo in the slide code, ran the file, got an error, corrected the typo and reran, but now get an error that doesn't go away.
A3 Remove the .bm and .toc files and try again.

Q4 \pause does not work in the align[15] environment.
A4 align does several tricky things, which make it impossible to use \pause. Use \onslide instead. See section 4.4.

Q5 My pstricks nodes appear on all overlays. Also: color doesn't seem to work with \onslide.
A5 Some PostScript tricks like nodes and color do not work with \onslide. Use \onslide* instead. See an example below.

[15] There are several environments doing similar things as align. Another example is the split environment, but more (often from the amsmath package) can cause similar trouble for \pause.

```
\documentclass{powerdot}
\usepackage{pst-node}
\begin{document}
\begin{slide}{Color}
\onslide*{2}{\cnode(0,-5pt){2pt}{A}}
This is {\onslide*{2-}{\color{red}} red} text.
\onslide*{2}{\cnode(0,-5pt){2pt}{B}}
\onslide{2}{\ncline{A}{B}}
\end{slide}
\end{document}
```

Q6 Do I need to edit style files to change a style a bit?

A6 No, you do not need to edit any style file. You can change any part of a certain style using the `\pddefinetemplate` and `\pddefinepalettes` commands. Here is an example that removes the left and right footers from the default style, places the slide number in the center footer and adds another palette.

```
\documentclass{powerdot}
\pddefinetemplate[slide]{slide}{
  lfpos=,rfpos=,cftemp=\theslide
}{}
\pddefinepalettes{mypalette}{
  \definecolor{pdcolor1}{rgb}{.27,.31,.44}
  \definecolor{pdcolor2}{rgb}{.85,.85,.92}
  \definecolor{pdcolor3}{rgb}{.8,.75,.98}
}
\pdsetup{palette=mypalette}
\begin{document}
\begin{slide}{Title}
\end{slide}
\end{document}
```

See section 9 for more information about these two commands.

Q7 Can I contribute to this project?

A7 Certainly. If you find bugs[16] or typos, please send a message to the mailinglist (see section 11.2). If you have developed your own style that is distinct from existing styles and would like to see it included in powerdot, please inform us by private e-mail and we will consider your contribution. Notice that included contributions will fall under the overall powerdot license and copyright notice, but that your name will be included in the documentation when you make a contribution. This is done to guarantee that we can adapt files if maintenance is needed.

If your question has not been answered at this point, advance to the next section to read where to find more answers.

11.2 Mailinglist

powerdot has a mailinglist from `freelists.org` and has its website here:

`http://www.freelists.org/list/powerdot`

There is a link to 'List Archive'. Please search this archive before posting a question. Your problem might already have been solved in the past.

If that is not the case, use the box on the page to type your e-mail address, choose the action 'Subscribe' and click 'Go!'. Then follow the instructions that arrive to you by e-mail. At a certain moment, you can login for the first time

[16] Make sure that you confirm that the bug is really caused by powerdot and not by another package that you use.

using an authorization code sent to you by e-mail. After logging in, you can create a password for future sessions using the 'Main Menu' button. The other buttons provide you some info and options for your account.

When you are all set, you can write to the list by sending an e-mail to

powerdot[at]freelists[dot]org

When writing to the list, please keep in mind the following very important issues.

1. We are volunteers!
2. Keep your questions related to powerdot.
3. Always supply a *minimal* example demonstrating your problem.
4. Don't send big files over the list.

We hope you will enjoy this service.

12 Source code documentation

In case you want regenerate the package files from the source or want to have a look at the source code description, locate `powerdot.dtx`, search in the file for `\OnlyDescription` and remove that and do

```
latex powerdot.tex
latex powerdot.tex
bibtex powerdot
makeindex -s gglo.ist -o powerdot.gls powerdot.glo
makeindex -s gind.ist -o powerdot.ind powerdot.idx
latex powerdot.tex
latex powerdot.tex
```

13 Implementation

13.1 General construction

This section explains the general idea of the class, how paper dimensions are chosen and how slides are created. We start with the paper.

This class uses the same idea as prosper and HA-prosper, namely that we create a background with pstricks and position text on it using `\rput` and some `minipage` environments. This is easier than writing a dedicated output routine that can handle all the material, but doesn't break pages when we don't want that. So, when starting to write the class, we first investigated how to deal with landscape slides and paper dimensions.

The job of making landscape slides can be done using geometry. The paper dimension was more of a problem. As LaTeX doesn't have the huge fonts that we need for presentations, we need to scale the usual fonts somehow. This could be done by using unusual paper dimensions (as beamer does) and hence relying on ps2pdf to cut off all the redundant material. But this doesn't produce a usable DVI or PS file. Instead, it was chosen to use DVI magnification. The entire slide is magnified by a factor of 2 and only the top left quarter of the paper is used (but you will never notice that due to the magnification). As we already decided to place all material in `minipages` using `\rput`, we didn't need the page anymore and it was easiest to use geometry to just remove the page margins altogether so that the bottom left corner would be `(0,0)` and the top right corner `(\slidewidth,\slideheight)`.

One extra remark on the paper type is necessary. We found that most common configurations of dvips use the `A4size` code when A4 dimensions are found. This code doesn't write an explicit PostScript paper command in the PS document and hence programs using this PS (like ps2pdf) don't know what paper to use and revert to the default, which is letter paper in most cases. This, of course, is something that we don't want and hence, powerdot will write these commands to the PS itself as to guarantee proper post processing of the PS.

Now that we made the decisions on how to create proper DVI, PS and PDF output, the next task was to create an easy interface to overlays. To avoid counting the overlays as is necessary with prosper, we implemented a system that first collects the entire body of an environment in a macro which can be reused multiple times. During execution of the body, the overlay commands like `\onslide` will keep a record of the biggest number that they find and that is the number of overlays to produce. Getting the body of the environment is done by collecting all material up to the next `\end` occurrence. If that control sequence has the proper argument (namely the slide that we started with), then we stop scanning and start processing the slide. With normal use, you will not notice this, but when doing special tricks like hiding `\end{slide}` in a macro, the process will fail as it relies on finding `\end{slide}` in the input stream without doing expansions. Often a work around can be found though. Have a look for instance at how `\section` creates a slide.

The next task was to provide a simple way to create templates. As the class is based on the idea of having a background with some material spread out over it, the template system follows this idea. One argument can be used to create the background, the other argument controls, via keys and options, several properties of the material that should be placed. By adding an `ifsetup` key, full control could be gained over the design of the template in every possible setup chosen by the user.

The final task for the class was to fill in all the 'details'. All the mechanisms were present, but sometimes they should not be active. For instance, overlays should not be created in handout mode. Other things to add to the class were counter protection on overlays, handles to the layout of the slide number, footnotes, a bibliography environment, empty slides, etcetera.

We hope that this section has made clear a little bit what you will be seeing when reading the next section with coding and why we chose to do it this way.

References

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We hope not to have forgotten anyone.

Version history

For more information on bug fixes, typeset the source code documentation (see section 12).

Index

Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.