Make Slides Using Beamer Beamer - The LATEX Document Class

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Development in National Day, 2004



Part I

Slides Tools







Advantage

- What you see is what you get
- All done in one software
- Basy to learn
- Disadvantage





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- ② Deal with mathematic formula easily
- Opening Professional typeset
- Plain text, easy to reuse





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Beamer A standard LATEX Document class, Need no other post progress program Work with other LATEX packages smoothly

foiltex Work with most of the available LATEX commands and environments

Use Macro \Mylogo put some graphic a

prosper Automatically generated table of contents, Portrait slides support

and possible to include notes in your presentation

pdfscreen Create document both fit to read in computer and for print



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Part II

Guidelines on Making Slides







Guidelines on What to Put on a Frame

- A frame with too little on it is better than a frame with too much on it.
- 2 Do not assume that everyone in the audience is an expert on the subject matter.
- Nerver put anything on a slide that you are not going to explain during the talk.
- Keep it simple.







Guidelines on Titles

- Put a title on each frame
- The title should really explain things.
- 3 Idealy, titles on consecutive frames should "tell a story" all by themeselves.
- In English, you should either always capitalize all words in frame title except for words like "a" or "the" (as in a title) or you always use the normal lowercase letters.
- In English, the title of the whole document should be capitalized, regardless of whether you capitalize anything else.







Guidelines on the Body Text

- Never use a smaller font size to "fit more on a frame"
- Prefer enumerations and itemize environment over plain text. Do not use long sentences.
- On not hyphenate words. If absolutely necessary, hyphenate words "by hand", using the command \-
- \bullet Beak lines "by hand" using the command \\. Do not rely on automatic line breaking.
- Text and numbers in figures should have the same size as normal text. Illegible numbers on axes usually ruin a chart and its message.



Guidelines on Graphics

- Put (at least) one graphic on each slide, whenever possible.
- Usually, place graphics to the left of the text
- Graphics should have the smae typographic parameters as the text
- While bitmap graphics, like photos, can be much more colorful than the rest of the text, vector graphics should follow the same "color logic" as the main text (like black==normal lines, red==hilighted parts, green==examples, blue==structure)
- Like text, you should explain everything that is shown on a graphic







Guidelines on Colors

- Use colors sparsely. The prepared themes are already quite colorful
- 2 Becareful when using bright colors on white background, especially when using green.
- Maximize contrast. Normal text should be black on white or at least something very dark on something very bright.
- Background shadings decrease the legibility without increasing the information content. Inverse video (bright text on dark background) can be a problem during presentations in bright environments since only a small precentage of the presentaion area is light up by the beamer. Inverse video is harder to reproduce on printouts and on trnasparencies.



Guidelines on Animations and Special Effects

- Use animations to explain the dynamics of systems, algorithms, etc.
- ② Do not use animations just to attract the attention of your audience. This often distracts attention away from the main topic of the slide
- On not use distracting special effects like "dissolving" slides unless you have a very good reason for using them.





Part III

Make Slides Using Beamer Class







- Only LATEXand pdflatex is need
- 2 Retain section structures
- Themes and content and indenpent
- Easy to use





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Outline



Installation

- First, copy xcolor, pgf, beamer files in preper texmf directory
- 2 Second, Rehash the TEXconfiguration





Outline



Workflow

- Oreate the structure, using \part \section \subsection
- Add Frames and Overlays, using \frame
- 3 Apply Themes and templates, using \usepackage





A Beginning File of Beamer

```
\documentclass{beamer}
\usepackage{beamerthemesplit}
\title{Example Presentation Created with Beamer}
\author{Till Tantau}
\date{\today}
\begin{document}
\frame{\titlepage}
\section*{Outline}
\frame{\tableofcontents}
\section{Introduction}
\subsection{Overview of the Beamer Class}
\frame {
   \frametitle{Features of the Beamer Class}
   \begin{itemize}
       \item<1-> Normal LaTeX class.
       \item<2-> Easy overlays.
       \item<3-> No external programs needed.
```

Part IV

Step by Step





Outline



- \onslide<slide-list>
- FromeSlide<slide-number>
- \only<slide-number>
- slide specifity after other command, e.g. \textbf<2>





- onslide<slide-list>
- \FromeSlide<*slide-number*>
- only<slide-number>
- slide specifity after other command, e.g. \textbf<2>





- onslide<slide-list>
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- alert





- alert
- uncover
- invisible





- alert
- uncover
- only
- invisible





- alert
- uncover
- visible
- invisible





- alert
- uncover





- You can specific action indendent, e.g
 \action < action-specification > \{< text >\}
- Set the default action using following command \[
 \begin{align*} beamerdefaultoverlayspecification \{ \\
 deault - overlay - specification > \}
 \end{align*}\]





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Theorem

A = B

Theorem

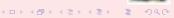
A = B

Proof.

Clearly,

$$A = \int_0^\infty e^{x^2} dx$$

$$\int_0^\infty e^{x^2} dx = B$$



Theorem

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Proof.

Clearly,

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As show earlier,

$$\int_0^\infty e^{x^2} dx = B$$

• Thus A = B



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• As show earlier,

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• Thus A = B



Frames II I

Options of Frame

- allowdisplaybreaks=
break-desirability>
- allowframebreaks=<fraction>Note: Frame break will has no overlays effects
- b,c,t vertically aligned at bottom/center/top
- containsverbatim
 Only one slide of the frame is typeset!
- label=<name>
- plain cause the headlines, footlines and sidebars to be suppressed
- shrink=<minimum-shrink-percentage>
- squeeze squeeze vertical spaces





- a headline
- a footline
- a left sidebar
- a right sidebar
- navigation symbols
- a logo
- a frame title, and
- some frame contents





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• Use **hypertarget** add hyper link.

```
▶ Jump to second slide
```

- **beamerskipbutton**
- • beamerreturnbutton





Use hypertarget add hyper link.
 \(hypertarget < \) overlay-specification > \(\{ \) target-name \{ \} text \}

```
beamerbutton
```

- beamerskipbutton
- ◆ beamerreturnbutton



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 \hypertarget < overlay-specification > {target-name{text}}

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Outline



- Change the main color of navigation and title bar \documentclass[red]{beamer}
- Change the average background color \beamersetaveragebackground \{red!10\}
- Set how to render overlay covered text.beamersetunconvermixins {not-yet-list} {once-more-list}
- Set on which slides covered text should have which opaqueness.
 - \opaqueness < overlay-specification > {percentage-of-opaqueness}





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Graphics, Animations, sounds, and Slide Transitions

Graphics



Animations



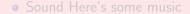
Graphics, Animations, sounds, and Slide Transitions

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Animations





Graphics, Animations, sounds, and Slide Transitions

Graphics



Animations

Sound Here's some music



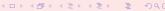
- Horizontal blinds
- 2 Vertical blinds
- Moving to the center from all four sides
- Moving from the center to four sides
- Dissolve
- Glitter
- Split verticalin
- Split verticalout
- wipe
- transduration





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User's Guide to the Beamer Class, Version 2.20 http://latex-beamer.sourceforge.net. April 19:201





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