

Simple Presentation

Beamer

Weibin Zhang

- 1: Univ. of Sci. and Tech. of China
- 2: Stony Brook University

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OUTLINE

1 WHAT'S A FRAME

2 THEMES

3 BASIC IDEAS

4 BLOCKS



FRAME COMPONENTS

- ① headline and footline
- ② left and right sidebar
- ③ navigation bars
- ④ navigation symbols
- ⑤ logo
- ⑥ frametitle [framesubtitle]
- ⑦ background
 - background canvas
 - main background
- ⑧ contents



```
\setbeamertemplate{headline}  
{  
  \begin{beamercolorbox}{section in  
    head/foot}  
    \vskip2pt\insertnavigation{\paperwidth}  
    \vskip2pt  
  \end{beamercolorbox}  
}
```



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THEMES IN BEAMER I

- No Navigation bar: default, boxes, Bergen, Pittsburgh and Rochester.
- Top bar: Antibes, Darmstadt, Frankfurt, JuanLesPins, Montpellier and Singapore.
- Bottom bar: AnnArbor, Berlin, CambridgeUS, Copenhagen, Dresden, Ilmenau, Luebeck, Malmoe, Szeged and Warsaw.
- Side Bar: Berkeley, Goettingen, Hannover, Marburg and PaloAlto.

Actually, each themes is divided into four subthemes: Outer theme, Inner theme, Color theme and Font theme.



THEMES IN BEAMER II

- Outer theme: set top bar, bottom bar and side bar and their constructure. Set with `\useoutertheme{outertheme}`, possible value include:
default, infolines, miniframes, sidebar, smoothbars, split, shadow, tree and smoothtree.
- Inner theme: set the layout of main content(Headline, Table, Theorem etc.). Set with `\useinnertheme{innertheme}`, possible value include:
default, circles, rectangles and rounded.
- Color theme: set color configuration. set with `\usecolorthem{colortheme}`, possible value include:
default, albatross, beaver, beetle, crane, dolphin, dove, fly, lily, orchid, rose, seagull, seahorse, sidebartab, structure, whale and wolverine.



- Font theme. Set with `\usefonttheme{fonttheme}`, possible value is:
default, serif, structurebold, structureitalicserif and structuresmallcapsserif.



\mode<mode>

- article
- presentation
 - beamer
 - handout
 - trans



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ADDING SLIDES

- Create a slide use the following code:

```
\begin{frame}[options]  
  \frametitle{title}  
  \framesubtitle{subtitle} "optional"  
  <contents>  
\end{frame}
```

- The possible options include:
 - **plain** removes all slide decorations (useful for larger images and first slide)
 - **c** and **b** align contents of the slide in the middle or bottom (default alignment is top, but this can easily be changed in the document class options)
 - **fragile** is necessary for slides that use the verbatim
 - **shrink** automagically makes the contents fit on one slide
 - **allowframebreaks** splits contents of a frame if it does not fit.



TITLE

SUBTITLE

Title Page.



TABLE OF CONTENTS

- Create outline using `\tableofcontents[options]`
- The possible options:
 - **currentsection** (all sections but current are greyed out)
 - **currentsubsection** (all subsection but current are greyed out)
 - **hideallsubsections** (all subsections are hidden)
 - **hideothersubsections** (all subsections of sections other than the current are hidden)
 - **pausesections** (shows the table of contents incrementally)
 - **pausesubsections** (finer increments than `\pausesections`)
 - **sections={2-3}** (only section 2 and 3 displayed)
 - **sectionstyle=1/2** (define style of current section (1), other sections (2) using show, shaded and hide, e.g. `sectionstyle=shaded/show`)
 - **subsectionstyle=1/2/3** (define style for current subsection(1), other subsections in current section(2), subsections in other sections(3))
- The commands `\section`, `\subsection`, etc. make a structure for tables of contents (outline are independent of slide titles)



FONTS

- There are five font themes:
 - **default** (sans serif)
 - **serif**
 - **structurebold** (titles, headlines, etc. are typeset in a bold font)
 - **structureitalicserif** (titles, headlines, etc. are typeset in an italic serif font)
 - **structuresmallcapsserif** (titles, headlines, etc. are typeset in a small caps serif font)
- Change the document-wise font size to 10, 11(default), 12 points in the options of documentclass.
- Colour text using `\textcolor{colour}{text}`
- `\alert{text}` command colours text red

Two extra font sizes defined within **beamer**:

- `\Tiny`
- `\TINY`



SEMIVERBATIM ENVIRONMENT

semiverbatim works like verbatim except that `\`, `{` and `}` retain their meaning.

This allows you to access Beamer formatting commands. If you want the command or environment to be ignored, you simply put a `\` in front of it.

NOTE: to use verbatim environment within a frame, be sure to declare the frame *fragile*.

Example

Using the **semiverbatim** environment, you can still **format** verbatim text with Beamer commands or you can display commands `\alert{like this}`



SPACING

- Vertical space: `\vskip[M][unit]: \vskip15pt`
- Horizontal space: `\hskip[M][unit]`
- Negative valuse can also be used to squeeze text or graphics together.



OVERLAY

There maybe more than one slide in some frames, which is called overlays. It come into effect by specifying the slides using `<and >`, or some special command: `\pause`.

Some commands have special overlay specification effects:

<code>\onslide<></code>	Text only appears on specified slides. If no text is given, text following the command will only appear on the specified slides.
<code>\only<>{}</code>	Text only appears on specified slides. When the text is hidden, it will occupy no space.
<code>\visible<></code>	Text only appears on specified slides and is completely transparent, but still occupies space.
<code>\invisible<></code>	the opposite of visible.
<code>\alt<>{ }{ }</code>	Takes two arguments: one for the default text and a second for the alternate text. The default text shows up on the specified slides. The alternate text shows up on all unspecified slides.
<code>\temporal<>{ }{ }{ }</code>	Takes three arguments: one for the text that will appear if the current slide comes before the specified slides, a second for the text that appears while currently on the specified slides, and a third for the text that appears after the specified slides have appeared.
<code>\uncover<>{ }</code>	The text will only be “uncovered” on the specified slides. On other slides, the text will still be typeset and will appear transparent.



OTHER CONTROL COMMANDS

- `\textbf<>{}`
- `\textit<>{}`
- `\color<>[]{}{}`
- `\alert<>{}`
- `\item<>`



OVERLAY EXAMPLE

onslide
only

invisible
default
firt

specification style



OVERLAY EXAMPLE

onslide

alternate

second

uncover

specification style



OVERLAY EXAMPLE

visible

invisible

alternate

third

uncover

specification style



OVERLAY EXAMPLE

visible
invisible
alternate
third



OVERLAY EXAMPLE

invisible
alternate
third

specification style



COLUMNS

call column environment:

```
\begin{columns}
  \column{.5\textwidth}
    First column text and/or code

  \column{.5\textwidth}
    Second column text and/or code
\end{columns}
```



BLOCKS

Blocks can be used to separate a specific section of text or graphics from the rest of the frame:

BLOCKS IN BEAMER

“Beamer is a \LaTeX class for creating presentations that are held using a projector ...”

Other block environments:

OTHER BLOCK ENVIRONMENTS

Content Type	Corresponding Environment
Generic	block
Theorems	theorem
Lemmas	lemma
Proofs	proof
Corollaries	corollary
Examples	example
Hilighted Title	alertblock



Use package 'fancybox' to add fancy borders to your presentation.

TEXT BORDER EXAMPLES

shadow

flat box

double box

oval box

Oval box



Sometimes you want to explain great details of a complex graphic, in this case, you can use `\framezoom` to create anticipated zoomings of interesting parts of the graphics.



TRANSITIONS

A slide transition is composed of a single command. Slide transitions are overlay specification aware. And there are two possible options for each transition:

- duration=<seconds>specifies the number of seconds the transitions effect needs
- direction=<degree>specifies the direction for directed effects.

AVAILABLE TRANSITIONS

<code>\transblindshorizontal</code>	Horizontal blinds pulled away
<code>\transblindsvertical</code>	Vertical blinds pulled away
<code>\transboxin</code>	Move to center from all sides
<code>\transboxout</code>	Move to all sides from center
<code>\transdissolve</code>	Slowly dissolve what was shown before
<code>\transglitter</code>	Glitter sweeps in specified direction
<code>\transslipverticalin</code>	Sweeps two vertical lines in
<code>\transslipverticalout</code>	Sweeps two vertical lines out
<code>\transsliphorizontalin</code>	Sweeps two horizontal lines in
<code>\transsliphorizontalout</code>	Sweeps two horizontal lines out



TRANSITIONS (CONTINUE)

Hello world



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THEOREM

THEOREM

There is no largest prime number.



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There is no largest prime number.

PROOF.

- Assume there is largest prime number: **p**
- let **N** be the product of all prime numbers $\leq \mathbf{p}$ plus 1:

$$N = 2 \times 3 \times 5 \times \cdots \times p + 1$$



THEOREM

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There is no largest prime number.

PROOF.

- Assume there is largest prime number: **p**
- let **N** be the product of all prime numbers $\leq \mathbf{p}$ plus 1:

$$N = 2 \times 3 \times 5 \times \cdots \times p + 1$$

- So **N** is larger than **p** and it can't be divided by any prime number $\leq \mathbf{p}$, so it should be a prime number; which conflicts with the assumption.



OUTLINE

5 OVERLAY

6 ADVANCED

- Template-Color-Font



OVERLAY USING \PAUSE

- First



OVERLAY USING \PAUSE

- First
- Second



OVERLAY USING \PAUSE

- First
- Second
- Third



OVERLAY USING \PAUSE

- First
- Second
- Third

▶ Go To Columns Slide



OVERLAYS IN LIST ENVIRONMENT

- On slide 1 only
- slides up to slide 4



OVERLAYS IN LIST ENVIRONMENT

- On slides 2 and 4
- slides up to slide 4



OVERLAYS IN LIST ENVIRONMENT

- On slides from 3 on
- slides up to slide 4



OVERLAYS IN LIST ENVIRONMENT

- On slides 2 and 4
- On slides from 3 on
- On slide 4 only
- slides up to slide 4



OVERLAYS IN LIST ENVIRONMENT

- On slides from 3 on
- On slide 5



OVERLAYS USING OPTION TO FRAME

- First
- Second
- Third



OVERLAYS USING OPTION TO FRAME

- First
- Second
- Third



OVERLAYS USING OPTION TO FRAME

- First
- Second
- Third



OVERLAYS USING OPTION TO ITEMIZE

- First
- Second
- Third



OVERLAYS USING OPTION TO ITEMIZE

- First
- Second
- Third



OVERLAYS USING OPTION TO ITEMIZE

- First
- Second
- Third



OVERLAYS USING \ITEM SPECIFICATION

- First
- Second
- Third



OVERLAYS USING \ITEM SPECIFICATION

- First
- Second
- Third



OVERLAYS USING \ITEM SPECIFICATION

- First
- Second
- Third



OVERLAYS WITH ALERT

- First
- Second
- Third



OVERLAYS WITH ALERT

- First
- Second
- Third



OVERLAYS WITH ALERT

- First
- Second
- Third



THEOREM

God doesn't exist.

► Proof



OUTLINE

5 OVERLAY

6 ADVANCED

- Template-Color-Font



SET BEAMERTEMPLATE

```
\setbeamertemplate{some beamer element} {your  
  def. for this template}
```

options:

SQUARE causes a small square to be used to render the template

CIRCLE $\{radius\}$ causes a circle of the given radius to ...

```
\setbeamertemplate{some beamer element}  
  [square]
```

```
\setbeamertemplate{some beamer element}  
  [circle]{3pt}
```



```
\setbeamercolor{some beamer element}{fg=red}  
\setbeamercolor{some beamer element}{bg=black}  
\setbeamercolor{some beamer element}  
  {fg=red , bg=black}
```

- structure color
- normal text color



```
\setbeamerfont{some beamer element}  
  {family=\sffamily , series=\bfseries ,  
   shape=\itshape , size=\large}
```

Add a star to the command to first “reset” the font.



BEAMER-TEMPLATE/-COLOR/-FONT I

- head/foot
 - headline
 - footline
 - page number in head/foot
 - section in head/foot
 - subsection in head/foot
 - subsubsection in head/foot
- sidebar
 - sidebar left
 - sidebar right
 - section in sidebar
 - subsection in sidebar
 - subsubsection in sidebar
- navigation
 - mini frame
 - navigation symbols
- toc
 - section in toc
 - section in toc shaded
 - subsection in toc
 - subsection in toc shaded
 - subsubsection in toc
 - subsubsection in toc shaded
- title
 - frametitle
 - frametitle continuation
 - title page
- background
 - background canvas
 - background
- button



- itemize
 - itemize item
 - itemize subitem
 - itemize subsubitem
- enumerate
 - enumerate item
 - enumerate subitem
 - enumerate subsubitem
 - enumerate mini template
- description
 - description item
- qed symbol



TITLE title, author, institute, date



THEOREM

God doesn't exist.

PROOF.

If god exist, why he/she never publish any important papers ? ☐

◀ Return

