BEAMER Notes

A Brief Guide

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From LaTeX-beamer-en project on wklchris-GitHub
https://github.com/wklchris/Note-by-LaTeX

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Preamble

After I've finished the 1st edition of LaTeX-cn project, I plan to learn more about LaTeX, especially its usage in research field. So BEAMER looks great.
When I write down this note, I have just started heading for a master's degree. So how to apply my LaTeXskill for my research goals weighs much to me. It may sound sad, but the fact is that I'm no longer the boy who just learnt what he wanted to, even it means nothing but only joy to him.
Fortunately I love LaTeX, and I hope it can help me a lot in the future. BEAMER is just a very first step for me.

Chris Wu

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Davis, CA

Outline of Section

What is BEAMER?

BEAMER is a LaTeX package made by *Till Tantau* for his phD thesis presentation. He uploaded it to CTAN one month after that in 2003, so it became a package that we can access.

Why do we use BEAMER?

Because BEAMER has many attractive features:

- Plentiful overlay and transition effects;
- Navigational bars;
- 4 outputs: screen, slides, handouts, and notes;
- Support pdfLaTeX and XeLaTeX.

Outline of Section

Beginning

First, BEAMER begins with:

```
\documentclass{beamer}
\usetheme{Antibes}
\title[Short]{BEAMER Tutorial}
\subtitle{A Short Guide Slide}
\author{K.L Wu\inst{Hey!}}
\institute{}
\date{\today}
```

The \inst command can make a superscript.
The \usetheme command will be introduced later.

To make the titlepage, here come these:

```
\begin{document}
\begin{frame}
  \titlepage
\end{frame}
...
```

Things in a frame environment will be put in a single slide(i.e. page). No page breaking command is required.

Slide Structure

You can set structure to your beamer, such as:

```
\lecture{Lec}{Lec-label}
\part{Part}
\section{Sec}
\subsection{Subsec}
\begin{frame}
...
\end{frame}
```

The structure commands are put outside of frame environment.
And they won't appear on your slide under default format.

If you use \part command, BEAMER also allows you to use \partpage to get a title of this part:

```
\part{Part}
\begin{frame}
  \partpage
\end{frame}
```

On most occasions, you only need to use \part, \section, and \subsection. If you really need a \lecture, you may use \insertlecture to print a lecture title:

```
\AtBeginLecture{\begin{frame}
  \Large Lecture Topic Today: \insertlecture
  \end{frame}}
```

The \AtBeginLecture and \AtBeginSection are used for putting something before \lecture and \section. Usually usage is like this:

```
% In preamble:
\AtBeginSection[]{\begin{frame}{Outline of Section}
  \tableofcontents[currentsection]
\end{frame}}
```

The empty square brackets mean that \section* won't have this outline of section before it starts.

To get a slide with title, use:

```
\begin{frame}
  \frametitle{A real title}
  \framesubtitle{A real sub-title}
\end{frame}
```

Or just:

```
\begin{frame}{A real title}
...
\end{frame}
```

Table of Contents

You can add these frame to the very first of your slides for Table of Contents (ToC).

```
\begin{frame}
  \frametitle{Outline}
  \tableofcontents
\end{frame}
```

Or you can use `\AtBeginSection` and so on.

If you want to show your ToC section by section, which means ToC will use more than one slide, you can try:

```
\tableofcontents[pausesections]
```

Math Contents

We can easily insert equations in slides:

$$\lim_{n\to\infty} \sum_{i=1}^{n} \frac{1}{2^i} = 1 \tag{1}$$

BEAMER predefines many theorem environments, namely: `theorem`, `corollary`, `definition`, `definitions`, `fact`, `example`, and `examples`.

This is `theorem` environment, the same usage in normal LaTeX:

Theorem

If A=B, B=C, then A=C.

Similarly, BEAMER has block environments: `block`, `alertblock`, and `exampleblock`.

```
\begin{alertblock}{Title}
This is an alertblock.
\end{alertblock}
```

Title Here

This is an alertblock.