

LaTeX Beamer explained

Jean-Etienne Poirrier

November 22, 2005

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The beamer class is a LaTeX class that allows you to create a beamer presentation. It can also be used to create slides. It behaves similarly to other packages like Prosper, but has the advantage that it works together directly with pdf_latex, but also with dvips. Text describing the class in this presentation is taken from their website: <http://latex-beamer.sourceforge.net/>.

Basic steps to use it

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Once you have installed the beamer class ¹, the basic steps to create a beamer presentation are the following:

- 1 Specify beamer as document class instead of article.
- 2 Structure your LaTeX text using section and subsection commands.
- 3 Place the text of the individual slides inside frame commands.
- 4 Run `pdflatex` on the text (or `latex` and `dvips`).

¹It is already installed in my Fedora Core 4 

Useful features

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The beamer class has several useful features:

- You don't need any external programs to use it other than `pdflatex`, but it works also with `dvips`.
- You can easily and intuitively create sophisticated overlays.
- Finally, you can easily change the whole slide theme or only parts of it.

Advantages

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The beamer class has several useful advantages:

- You only need a text editor and LaTeX to create a slideshow
- You only need a PDF reader to show it ²
- Your presentation is in a light text file (+ media if present)
- There are plenty of themes readily available
- Big letters ³ = less text = more easy to read / understand

²they are nearly everywhere

³you can of course apply any LaTeX cosmetic modification to your text 

Competitors

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Other solutions are competitors:

- magicpoint
- LaTeX slide class
- OpenOffice.org Impress

Is MagicPoint better than LaTeX Beamer?

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This is a personal opinion. But, if you are fluent in LaTeX, you don't need to learn another markup language (like in MagicPoint). Direct export to HTML is an advantage for MagicPoint. Direct export to PDF is an advantage for LaTeX Beamer.

Is LaTeX slide class better than the Beamer one?

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Again, it is a personal opinion. I don't know much about the slide class. Anyone here have an experience?

Is OpenOffice.org Impress better than LaTeX Beamer?

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As usual, it is a personal opinion. If you need a WYSIWYG software, don't use LaTeX Beamer. If your computer isn't powerful enough to handle OpenOffice.org, welcome to LaTeX Beamer!

Some examples

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In the next few slides, you'll find some examples showing that everything you can do with LaTeX, you can also do it with LaTeX Beamer.

I am not a specialist: I discovered Beamer a few hours ago. Other good example are available on the LaTeX Beamer homepage ⁴.

⁴as you can already see, you can easily add hyperlinks 

Include a table in your slideshow

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Restrained	Swivel	Telemetry
~ 400bpm ~ 140mmHg	~ 380bpm ~ 120mmHg	~ 310 bpm ~ 100mmHg

Table: Heart beat and blood pressure using different monitoring methods

Include a picture in your slideshow

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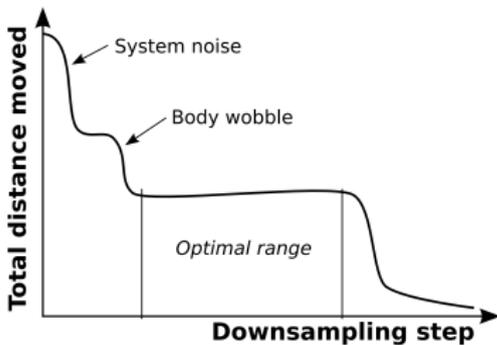


Figure: Our own test of downsampling

Include equations in your slideshow

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$$8/4 = \frac{8}{4} = 8 \cdot \frac{1}{4} = 8 \cdot 4^{-1}$$

$$\begin{pmatrix} 2 & 1 \\ 0 & 1 \\ 1 & 4 \end{pmatrix}$$

Themes

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You can use *a lot* of themes already included in Beamer (see in `/usr/share/texmf/tex/latex/beamer/beamertheme*.sty`).

You've already seen the Berkeley theme. Some other examples will follow (even the first page is changing but it's up to you to try by yourself).

Theme: Antibes

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LaTeX Beamer explained

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What is LaTeX Beamer?

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Figure: Theme Antibes

Theme: bars

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The screenshot shows a Beamer presentation slide. At the top, there is a navigation bar with four items: 'Outline', 'Introduction', 'Examples', and 'About'. The 'Introduction' item is highlighted with a white dot and four small circles below it. Below the navigation bar, the text 'Introduction to the LaTeX Beamer class' is displayed. The main content of the slide is the title 'What is LaTeX Beamer?' in a large, white font on a dark blue background.

The beamer class is a LaTeX class that allows you to create a beamer presentation. It can also be used to create slides. It behaves similarly to other packages like Prosper, but has the advantage that it works together directly with pdflatex, but also with dvips. Text describing the class in this presentation is taken from their website: <http://latex-beamer.sourceforge.net/>.

The screenshot shows the footer of the Beamer presentation. It contains the text 'Jean-Etienne Poirrier' and 'LaTeX Beamer explained' in a white font on a dark blue background. To the right of the text, there are several small icons for navigation, including arrows and symbols for search and refresh.

Figure: Theme bars

Theme: Bergen

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Figure: Theme Bergen



Theme: Berlin

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The screenshot shows a Beamer presentation slide. At the top, there is a dark navigation bar with four items: 'Outline', 'Introduction' (which is highlighted with a white dot and four small circles below it), 'Examples' (with three small circles below it), and 'About' (with two small circles below it). Below the navigation bar, the text 'Introduction to the LaTeX Beamer class' is displayed. The main content area of the slide has a dark blue background and contains the text: 'What is LaTeX Beamer?'. Below this, there is a white text box containing the following paragraph: 'The beamer class is a LaTeX class that allows you to create a beamer presentation. It can also be used to create slides. It behaves similarly to other packages like Prosper, but has the advantage that it works together directly with pdflatex, but also with dvips. Text describing the class in this presentation is taken from their website: <http://latex-beamer.sourceforge.net/>.' At the bottom of the slide, there is a dark blue footer bar containing the text 'Jean-Etienne Poirrier' and 'LaTeX Beamer explained'. Above the footer bar, there is a set of small navigation icons.

Figure: Theme Berlin

Theme: JuanLesPins

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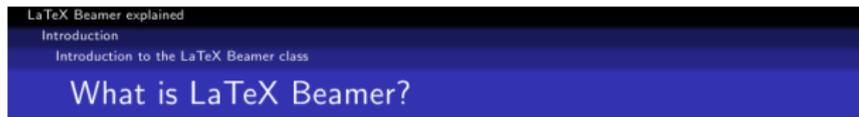
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Figure: Theme JuanLesPins



Theme: Madrid

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<http://latex-beamer.sourceforge.net/>.

Figure: Theme Madrid

Theme: PaloAlto

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Figure: Theme PaloAlto



Theme: Singapore

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Figure: Theme Singapore



About the author of this slideshow

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Jean-Etienne Poirrier is a Ph.D. student in neuroscience at the University of Liege, in Belgium. Here is my website (where you can find these slides and much more):

<http://www.poirrier.be/jean-etienne>.

For the “About” section, you can obviously use the thanks-thing in the author field, in the beginning of the presentation. But I personally don’t find it pretty.