

LaTeX Beamer explained

Jean-Etienne Poirrier

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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 pdflatex, 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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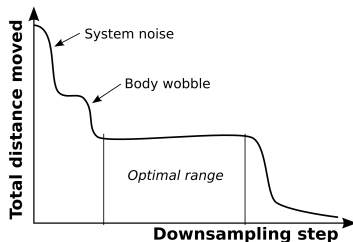


Figure: Our own test of downsampling

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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Navigation icons: back, forward, search, etc.

Figure: Theme Antibes

Navigation icons: back, forward, search, etc.

Theme: bars

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Figure: Theme bars

Theme: Bergen

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A set of small navigation icons typically found in Beamer presentations, including symbols for back, forward, search, and other slide controls.

Figure: Theme Bergen

◀ ◻ ▶ ◀ ◻ ▶ ◀ ≡ ▶ ◀ ≡ ▶ ≡

Theme: Berlin

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Figure: Theme Berlin

Theme: JuanLesPins

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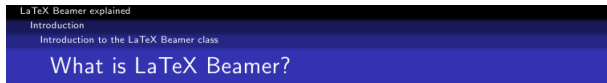
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Navigation icons: back, forward, search, etc.

Figure: Theme JuanLesPins

Navigation icons: back, forward, search, etc.

Theme: Madrid

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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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About

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.