Org-Mode Beamer Example

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Outline

1. Introduction

2. A collection of example pages

3. Conclusions

Introduction   A collection of example pages   Conclusions
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Topic

An alternative title page for a section

Introduction

Instructions

Look at the Org source file to learn about available options. I also added many comments explaining the usage, there.

- generating presentation notes.
- inserting a table of contents with the current section highlighted at the beginning of each section.
- configuring transparency of yet uncovered overlay elements.

Debugging

Look at the pdflatex messages in the buffer named `*Org PDF LaTeX Output*`
You may want to run the TeX compilation interactively with something like

`pdflatex -shell-escape beamer-example.tex`

to get the interactive LaTeX shell help

Org mode version information

```
Emacs version:
GNU Emacs 28.1 (build 1, x86_64-pc-linux-gnu, GTK+ Version 3.24.33, cairo v
 of 2022-08-13

org version: 9.5.5
```

Sources and Links

- I started this example based on the Worg hosted example by Eric S. Fraga
- Basic LaTeX Beamer links
  - An introduction to Beamer (German)
  - great beamer reference card by Fabrice Niessen on GitHub.
  - nice link for choosing a theme: beamer theme matrix
  - nice example of beamer features (pure Latex)
  - Presentations using Latex - the Beamer Class by Amber Smith. Excellent introduction showing many beamer features.

A simple slide

This slide consists of some text with a number of bullet points:

- the first, very *important*, point!
- the previous point shows the use of the special markup which translates to the Beamer specific *alert* command for highlighting text.

The above list could be numbered or any other type of list and may include sub-lists.

A more complex slide

This slide illustrates the use of Beamer blocks. The following text, with its own headline, is displayed in a block:

Theorem (Org mode increases productivity)

- *org mode means not having to remember LATEXcommands.*
- *it is based on ascii text which is inherently portable.*
- *Emacs!*

Tables

The size of the table font can be chosen by giving a #+LATEX: \small command (or \tiny or \footnotesize)

WNs	Processors	Cores/node	HS06/node	total cores	total HS06
20	2*Xeon X5560	8	118	160	2360
11	2*E5-2670 2.60GHz	16	263	176	2893
4	2*AMD 6272 2.40GHz	32	241	128	964
35				464	6217

Exporting beamer presentations

Frequently there is a need to convert a beamer presentation to MS powerpoint for sharing or contributing slides

The best solution known to me as of 2022 is

1. open the PDF using `libreoffice --impress`
2. Save as pptx
   - may need to adapt slides or copy content to another template

Topic

1. Introduction

2. **A collection of example pages**

3. Conclusions

block environments

a block

```
\begin{block}{A block}
...
\end{block}
```

an alert block

```
\begin{alertblock}{An alert block}
...
\end{alertblock}
```

an example block

```
\begin{exampleblock}{An alert block}
...
\end{exampleblock}
```

colorbox

a block containing a colorbox

  The beamercolorbox text and an Org example block
```
\begin{beamercolorbox}[shadow=true, rounded=true]{eecks}
...
\end{beamercolorbox}
```

a color box test made with inline LaTex code

  Just some text.

A `fullframe` is a `frame` with an ignored slide title. `frametitle` is set to the empty string

- A headline with an `ignoreheading` environment will only have its contents displayed in the output. The heading text itself is ignored, and no heading bar is shown.

  - Contents are not inserted in any `frame` environment. It makes no sense to use this as major element for a slide.

- `ignoreheading` is useful as a structural element in order to again place normal text after a previous element (like a block or a column environment).

structureenv environment

- For highlighting text.
- To help the audience see the structure of your presentation.
- On this slide you should see that the text of the upper items is differently typeset from the bottom item in the *structureenv*.

- you need to use `ignoreheading` (like here) in order to then insert some more normal text after the structureenv.

`definition` environment

Definition (definition)

Contents of the definition

proof environment and revealing line by line

proof.

- Suppose *p* were the largest prime number.

proof environment and revealing line by line

proof.

- Suppose p were the largest prime number.
- Let q be the product of the first p numbers.

proof environment and revealing line by line

proof.

- Suppose *p* were the largest prime number.
- Let *q* be the product of the first *p* numbers.
- Then *q + 1* is not divisible by any of them.

`proof` environment and revealing line by line

proof.

- Suppose p were the largest prime number.
- Let q be the product of the first p numbers.
- Then $q + 1$ is not divisible by any of them.
- But $q + 1$ is greater than 1, thus divisible by some prime number not in the first p numbers. $\square$

numbered list over two pages (1)

1. one
2. two
3. three
4. four

numbered list over two pages (2)

Use the [@N] syntax to start a numbered list at a certain value.

---

block A

⑤ five

⑥ six

⑦ seven

---

block B

⑧ eight

⑨ nine

⑩ ten

---

long source code over two pages I

Use the `allowframebreaks` Beamer option.

```
(use-package python
  :config (progn
            ;; load my own python helper functions
            (load-file (concat dfeich/site-lisp "/my-pydoc-helper.el"))

            (defun dfeich/python-keydefs ()
              (define-key python-mode-map (kbd "<M-right>")
                'python-indent-shift-right)
              (define-key python-mode-map (kbd "<M-left>")
                'python-indent-shift-left))
            (add-hook 'python-mode-hook #'dfeich/python-keydefs)

            ;; show line numbers on the left for python
            (add-hook 'python-mode-hook 'linum-mode)

            (when (featurep 'flycheck)
              (add-hook 'python-mode-hook 'flycheck-mode))

            (use-package jedi-core
              :ensure t
              :config (progn
                        (autoload 'jedi:setup "jedi-core" nil t)
                        (add-hook 'python-mode-hook 'jedi:setup)
```

long source code over two pages II

```
(setq jedi:complete-on-dot t)
(setq jedi:server-args '("--log" "/tmp/jedi.log"
                         "--log-level" "INFO"))
(when (featurep 'company)
  (defun dfeich/python-mode-hook ()
    (add-to-list 'company-backends 'company-jedi)
    )
  (add-hook 'python-mode-hook 'dfeich/python-mode-hook))))))
```

placing text at the bottom of a page

This text is on top

This text is on the bottom

reducing font size in bullet lists

This is a workaround to have the bullet list hierarchy not suddenly produce bigger font for the lower hierarchy, if you only reset the main font.

#+LATEX: \footnotesize \let\small\footnotesize

- example
  - example
    - example
  - example
- example

Text colors

Examples for colored text (using the xcolor package): Text1 Text2 Text3 Text4
Text5
TODO: Currently, only the xcolor default names are available, because the xcolor
gets pulled in without options by an early dependency. Need to investigate.

Topic

Summary

- org is an incredible tool for time management
  - it is also excellent for composing documents
- Beamer is a very powerful LaTeX package for presentations
- the combination is unbeatable: Org Beamer
  - ease of composing slides fast and being able to use all the other Org features
  - though, it takes a bit of a learning curve and examples to copy from

Appendix

SOME BACKUP SLIDES. The Appendix will not be listed in the table of contents.

Backup slide 1

Some backup info

Backup slide 2

These details are not part of the main talk.