

Documents and presentations with org-mode

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The Changelog

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Outline

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The Emacs series

This is fifth in a [series on Emacs and org-mode](#).

This blog post was generated from [an org-mode source](#) and is available as: [a blog page](#), slides (PDF format), and a PDF document.

Section 1

About org-mode exporting

Background

org-mode isn't just an agenda-making program. It can also export to lots of formats: \LaTeX , PDF, Beamer, iCalendar (agendas), HTML, Markdown, ODT, plain text, man pages, and more complicated formats such as a set of web pages.

This isn't just some afterthought either; it's a core part of the system and integrates very well. One file can be source code, automatically-generated output, task list, documentation, and presentation, all at once.

Some use org-mode as their preferred markup format, even for things like \LaTeX documents. The org-mode manual has an extensive [section on exporting](#).

Getting started

From any org-mode document, just hit `C-c C-e`. From there will come up a menu, letting you choose various export formats and options. These are generally single-key options so it's easy to set and execute. For instance, to export a document to a PDF, use `C-c C-e l p` or for HTML export, `C-c C-e h h`.

There are lots of settings available for all of these export options; see the manual. It is, in fact, quite possible to use \LaTeX -format equations in both \LaTeX and HTML modes, to insert arbitrary preambles and settings for different modes, etc.

Add-on packages

ELPA contains many additional exporters for org-mode as well. Check there for details.

Section 2

Beamer slides with org-mode

About Beamer

Beamer is a \LaTeX environment for making presentations. Its features include:

- ▶ Automated generating of structural elements in the presentation (see, for example, [the Marburg theme](#)). This provides a visual reference for the audience of where they are in the presentation.
- ▶ Strong help for structuring the presentation
- ▶ Themes
- ▶ Full \LaTeX available

Benefits of Beamer in org-mode

org-mode has a lot of benefits for working with Beamer. Among them:

- ▶ org-mode's very easy and strong support for visualizing and changing the structure makes it very quick to reorganize your material.
- ▶ Combined with org-babel, live source code (with syntax highlighting) and results can be embedded.
- ▶ The syntax is often easier to work with.

I have completely replaced my usage of LibreOffice/Powerpoint/GoogleDocs with org-mode and beamer. It is, in fact, rather frustrating when I have to use one of those tools, as they are nowhere near as strong as org-mode for visualizing a presentation structure.

Headline Levels

org-mode's Beamer export will convert sections of your document (defined by headings) into slides. The question, of course, is: *which* sections? This is governed by the H [export setting](#) (org-export-headline-levels).

There are many ways to go, which suit people. I like to have my presentation like this:

```
#+OPTIONS: H:2
#+BEAMER_HEADER: \AtBeginSection{\frame{\sectionpage}}
```

This gives a standalone section slide for each major topic, to highlight major transitions, and then takes the level 2 (two asterisks) headings to set the slide. Many Beamer themes expect a third level of indirection, so you would set H:3 for them.

Themes and settings

You can configure many Beamer and \LaTeX settings in your document by inserting lines at the top of your org file. This document, for instance, defines:

```
#+TITLE: Documents and presentations with org-mode
#+AUTHOR: John Goerzen
#+BEAMER_HEADER: \institute{The Changelog}
#+PROPERTY: comments yes
#+PROPERTY: header-args :exports both :eval never-export
#+OPTIONS: H:2
#+BEAMER_THEME: CambridgeUS
#+BEAMER_COLOR_THEME: default
```

Advanced settings

I like to change some colors, bullet formatting, and the like. I round out my document with:

```
# We can't just +BEAMER_INNER_THEME: default because that picks the theme default.
# Override per https://tex.stackexchange.com/questions/11168/change-bullet-style-formatting-
#+BEAMER_INNER_THEME: default
#+LaTeX_CLASS_OPTIONS: [aspectratio=169]
#+BEAMER_HEADER: \definecolor{links}{HTML}{0000A0}
#+BEAMER_HEADER: \hypersetup{colorlinks=,linkcolor=,urlcolor=links}
#+BEAMER_HEADER: \setbeamertemplate{itemize items}[default]
#+BEAMER_HEADER: \setbeamertemplate{enumerate items}[default]
#+BEAMER_HEADER: \setbeamertemplate{items}[default]
#+BEAMER_HEADER: \setbeamercolor*{local structure}{fg=darkred}
#+BEAMER_HEADER: \setbeamercolor{section in toc}{fg=darkred}
#+BEAMER_HEADER: \setlength{\parskip}{\smallskipamount}
```

Here, aspectratio=169 sets a 16:9 aspect ratio, and the remaining are standard \LaTeX /Beamer configuration bits.

Shrink (to fit)

Sometimes you've got some really large code examples and you might prefer to just shrink the slide to fit.

Just type `C-c C-x p`, set the `BEAMER_opt` property to `shrink=15`.

(Or a larger value of shrink). The previous slide uses this here.

Result

Here's the end result:

Beamer slides with org-mode

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Section 3

Interactive Slides

Interactive Emacs Slideshows

With the [org-tree-slide package](#), you can display your slideshow from right within Emacs. Just run `M-x org-tree-slide-mode`. Then, use `C->` and `C-<` to move between slides.

You might find `C-c C-x C-v` (which is `org-toggle-inline-images`) helpful to cause the system to display embedded images.

HTML Slideshows

There are a lot of ways to export org-mode presentations to HTML, with various levels of JavaScript integration. See the [non-beamer presentations section](#) of the org-mode wiki for details.

Section 4

Miscellaneous

Additional resources to accompany this post

- ▶ [orgmode.org beamer tutorial](#)
- ▶ [L^AT_EX](#) wiki
- ▶ [Generating section title slides](#)
- ▶ [Shrinking content to fit on slide](#)
- ▶ A [great](#) resource: [refcard-org-beamer](#)
 - ▶ See its [Github repo](#)
 - ▶ Make sure to check out both the PDF and the .org file
- ▶ A nice [Theme matrix](#)

Up next in my Emacs series...

mu4e for email!