LaTeX presentations using `altai` with the `seminar` class

A guide for the users

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Introduction

The `altai` style file was written to customize the `seminar` LaTeX class for (technical) presentations. It is meant for consistent personal use without recurrent worries about basic formatting. It reflects my minimalistic style.

The style file does not provide any general structures that facilitate further customization. However, the source file is short and simple enough so that modifications are straightforward.

The following commonly used packages are pre-loaded:

```
graphicx
amsmath,amssymb
color
```

Start making slides

Simply start the source file with

```
\documentclass{seminar}
\usepackage{altai}
...
\begin{document}
```

Within the document, each slide is generated in a slide environment:

```
\begin{slide}
...
\end{slide}
```

To include a title for the slide, use `\SH{title}` at the begining in the environment. `\SH` is short for `\slideheading`. To center the slide title, declare `\centerslidetitletrue`.

Page size and slide size

`Altai` assumes US letter paper in landscape orientation and defines slide size and margins accordingly. The slide size is set to make maximal use of the space.

Owing to the `dsips` and `ps2pdf` processing routine I use, the following is needed in the preamble:

```
\special{papersize=11in,8.5in}
\AtBeginDvi{\pdfmark{pdfmark=/PAGES, Raw={/Rotate -90}}}
```

To make changes to paper size, slide size, and margins, look into the source file `altai.sty`.

Overall adjustment on a slide

By default, materials on a slide are flushed left and top.

To achieve vertical centering, use

`\centerslidestrue`

at the begining of the slide (like this slide). This command can also be used outside of all slides, in the preamble, say, to have a global effect.

To change the horizontal adjustment, use

`\raggedslides[`*`len`*`]`

where *len* is the maximum space between the end of the line and the right margin. Use `0pt` will cause things to be flushed to the right.

Font size

In addition to the usual declarations such as `\small`, `\large`, etc., there're three ways to change the font size:

- Use `\slidesmag{`*n*`}` in the preamble, where *n* is an integer from -5 to 9. `Seminar` default is 4. `Altai` changes the default to 5.
- Use options `11pt` or `12pt` for `\documentclass` to slightly increase the font. Default is `10pt`.
- Use `\ptsize{`*n*`}`, where *n* can be 8, 9, 10, 11, 12, 14, or 17. This has the same effect as the documentclass option but clearly has a larger range of choices. This command can be used locally to affect font size within its group.

There's a difference between changing fonts and changing the magnificance—`\slidesmag` will enlarge everything on the slide, including spaces, whereas font change commands affect fonts only.

Length and space

Usual absolute length units such as `mm`, `cm`, `in` and font-relative units such as `em`, `ex` are automatically enlarged by the magnificance factor.

To ensure the actual length on the resultant slides, use units `\semin` or `\semcm`.

If you use `\setlength{`*`dimen`*`}{`*`len`*`}`, *dimen* will be magnified on the resultant slides just like fonts and other things.

If you use `\setslidelength{`*`dimen`*`}{`*`len`*`}`, *dimen* on the final slides will be of the length you set it to.

`\textwidth` and `\textheight` are redefined to reflect the dimensions of the slide and can be used for relative spacing.

Headers and footers

The default page style includes a very low-key page number in the lower-right corner of the slide.

To customize the header and footer, use

```
\newpagestyle{mystyle}{...headers...}{...footers...}
\pagestyle{mystyle}
```

In the footer one typically wants to use either `\thepage` or `\theslide`. `\thepage` prints n, the slide number, for simple slides and n-a, slide number followed by overlay number, for slides with overlays. `\theslide` prints the slide number only.

The cover slide

The environment `coverslide` is just a regular slide, except that header and footer are suppressed and the slide number is set to zero. You have full freedom to lay out things on the cover slide, for example:

```
\begin{coverslide}
  \vspace*{0.15\textheight}
  \centering

  \texttitle{title of the talk}\par
  \textsubtitle{subtitle of the talk}\par
  \vfil
  \textauthor{%
  author \\
  institution \\ \today
\end{coverslide}
```

Adjust the size of a particular slide

Sometimes you want to squeeze in just a little bit more stuff on a particular slide. Instead of downsize the font, you can use

\extraslideheight{*len*}

to get some more space at the bottom of the slide. As a matter of fact, `seminar` uses `\extraslideheight{10pt}` by default.

If initially you put everything on one slide, `seminar` will break it into multiple pages for you. This can be convenient at the early stage of your work. Within a slide environment you can start new slides using the command `\newslide`.

Adjust the size of a particular slide (cont'd)

The slide environment takes an optional argument the lets you change the dimensions of a single slide:

```
\begin{slide}[width,height]
```

where "width" is the width of the slide when you view it in landscape orientation, even if you're make a portrait slide.

This is only useful for making smaller slides (like this one) because if you set the slide to be bigger than the paper size, overflow will be cut off.

Make a portrait slide

The default orientation is landscape, and there appears to be no reason to change this default setting. If, for some reason, you want a portrait slide, use the star-ed form of the environment:

```
\begin{slide*}
...
\end{slide*}
```

Overlays (I)

Materials on the slide outside of overlays are regarded as layer 0 and are displayed throughout. Overlayed items are in overlays 1 through 9.

To have things on overlay number #, say 2, use either

{\overlay{#} *...stuff...* }

or

\begin{overlay}{#} *...stuff...* \end{overlay}.

Occasionally you may need \overlay{0} to bring things to the top, because overlays can be nested.

If your overlays are in regular order, you can use

\overlaynext{ *...stuff...* }

(short for {\SeminarNextOverlay}) to let the computer keep track of the layer counters.

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Cumulative overlays are set up by using `\stackoverlays` (short for `\SeminarCumulativeOverlays`) anywhere within the slide environment, or you can start the overlay syntax directly because this type is automatically assumed.

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This type of overlays is set up by using

`\jumpoverlays`

(short for `\SeminarProgressiveOverlays`) in the slide environment.

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The type of theses overlays is determined as explained before.

Use color

Use color syntax defined in the package `color`:

```
{\color{colorname} ...stuff... }
```

Some common color names are predefined. Use

```
\definecolor{colorname}{rgb}{r,g,b}
```

to define new color names. For example, after

```
\definecolor{mycolor}{rgb}{.3, .5, .2}
```

`\color{mycolor}` will render subsequent things in this color.
Remember to use { and } to restrict its scope of impact.

Color works in math mode as well, for example,

$$x^2 + \sqrt{2y/\pi} = \sin e^{\lambda t}.$$

Customize list bullets

1. Enumerate item 1
   (a) Enumerate item 1
      i. Enumerate item 1
   (b) Enumerate item 2
2. Enumerate item 2

- Itemize item 1
  - Item 1
  - Item 2
    - Item 1
    - Item 2
- Itemize item 2

Background image and full slide pictures

To have a background image, use

```
\slidebgimage{width=α\SeminarPaperWidth,
height=β\SeminarPaperHeight}{imagefilename}
```

where α and β are decimal numbers. You can specify either width or height, or both. But specify at least one. When you specify only one, the aspect ratio of the image is preserved. (I plan to make this command a little more flexible.) The image must be in a format accepted by your LaTeX-to-PDF processor.

However, this command will cause every slide in its scope to have the image background and therefore could generate a huge file. A better idea is to enclose this command and the target slides with `\begingroup` and `\endgroup`.

Paper printout

To print the slides for paper handout, first use the “handout” option for `altai` to set wider margins, smaller magnificance, and turns off overlays:

```
\usepackage[handout]{altai}
```

Then process the source file to generate a PDF document, say, `talk.pdf`.

Then use the `mergepdf` script to put either 4 or 6 slides 4 on one physical page:

```
mergepdf -x 2x2 -f -l -o talk-4up.pdf talk.pdf
mergepdf -x 2x3 -f -o talk-6up.pdf talk.pdf
```

Links to external movies, other files

It is possible to play movie files within a pdf document, but it is somewhat involved for LaTeX. For now, I'm content with planting in the slide a URL link which, on a click, will open up the default program to show (or play) the external file:

`\href{URL}{`*text*`}`

`\usepackage{hyperref}` should be included in the preamble. URL is either a full URL or relative to the base URL defined by `\hyperbaseurl{}`. *text* is the clickable appearrance of the link. It can be text, pictures, or whatever.

Notes

to be done

If you want to know more

All the ideas you've read so far come from two sources:

1. Documentation for the `seminar` class by Timothy Van Zandt. The file name is `sem-user.pdf`. It's included in standard LaTeX distributions.
2. A series of "seminar demonstration files" by Denis Girou. Simply google "latex seminar".