# Slides and Course Notes\*

## Michael Kohlhase FAU Erlangen-Nürnberg http://kwarc.info/kohlhase

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### Abstract

We present a document class from which we can generate both course slides and course notes in a transparent way.

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<sup>\*</sup>Version ? (last revised ?)

## 1 Introduction

The mikoslides document class is derived from beamer.cls [Tana], it adds a "notes version" for course notes derived from the omdoc class [Kohlhase:smomdl] that is more suited to printing than the one supplied by beamer.cls.

## 2 The User Interface

The mikoslides class takes the notion of a slide frame from Till Tantau's excellent beamer class and adapts its notion of frames for use in the STEXand OMDoc. To support semantic course notes, it extends the notion of mixing frames and explanatory text, but rather than treating the frames as images (or integrating their contents into the flowing text), the mikoslides package displays the slides as such in the course notes to give students a visual anchor into the slide presentation in the course (and to distinguish the different writing styles in slides and course notes).

In practice we want to generate two documents from the same source: the slides for presentation in the lecture and the course notes as a narrative document for home study. To achieve this, the mikoslides class has two modes: *slides mode* and *notes mode* which are determined by the package option.

## 2.1 Package Options

The mikoslides class takes a variety of class options:<sup>1</sup>

slides

• The options slides nd notes notes switch between slides mode and notes mode (see Section 2.2).

sectocframes

EdN:1

EdN:2

• If the option sectocframes is given, then special frames with section table of contents are produced headers <sup>2</sup>

showmeta

• showmeta. If this is set, then the metadata keys are shown (see [Koh16] for details and customization options).

frameimages fiboxed

• If the option frameimages is set, then slide mode also shows the \frameimage-generated frames. If also the fiboxed option is given, the slides are surrounded by a box.

topsect

• topsect= $\langle sect \rangle$  can be used to specify the top-level sectioning level; the default for  $\langle setc \rangle$  is section.

## 2.2 Notes and Slides

frame

Slides are represented with the frame just like in the beamer class, see [Tanb] for details. The mikoslides class adds the note environment for encapsulating the

<sup>&</sup>lt;sup>1</sup>EdNote: leaving out noproblems for the moment until we decide what to do with it.

<sup>&</sup>lt;sup>2</sup>EDNOTE: document the functionality

course note fragments.<sup>1</sup>

Note that it is essential to start and end the notes environment at the start of the line – in particular, there may not be leading blanks – else IATEX becomes confused and throws error messages that are difficult to decipher.

```
\begin{note}
  We start this course with ...
\end{note}

\begin{frame}
  \frametitle{The first slide}
    ...
\end{frame}
\begin{note}
    ... and more explanatory text
\end{note}

\begin{frame}
  \frametitle{The second slide}
    ...
\end{frame}
    ...
\end{frame}
...
```

Example 1: A typical Course Notes File

By interleaving the frame and note environments, we can build course notes as shown in Figure 1.

Sometimes, we want to integrate slides as images after all – e.g. because we already have a PowerPoint presentation, to which we want to add STEXnotes. In this case we can use  $\frac{\langle opt \rangle}{\langle opt \rangle}$ , where  $\langle opt \rangle$  are the options of  $\frac{\langle opt \rangle}{\langle opt \rangle}$  and  $\frac{\langle opt \rangle}{\langle opt \rangle}$  is the file path (extension can be left off like in  $\frac{\langle opt \rangle}{\langle opt \rangle}$ ). We have added the label key that allows to give a frame label that can be referenced like a regular beamer frame.

\frameimage

\inputref\*

EdN:3

If we want to transclude a the contents of a file as a note, we can use the \inputref\* macro: \inputref\*{foo} is equivalent to

\begin{note}
\inputref{foo}
\end{note}

nomtext

There are some environments that tend to occur at the top-level of note environments. We make convenience versions of these: e.g. the nomtext environment

<sup>&</sup>lt;sup>1</sup>MK: it would be very nice, if we did not need this environment, and this should be possible in principle, but not without intensive LaTeX trickery. Hints to the author are welcome.

 $<sup>^3\</sup>mathrm{EdNote}\colon$  MK: the hyperref link does not seem to work yet. I wonder why but do not have the time to fix it.

nomgroup

is just an omtext inside a note environemnt (but looks nicer in the source, since it avoids one level of source indenting). Similarly, we have the nomgroup environment.

#### 2.3 Header and Footer Lines

## 2.4 Colors and Highlighting

\textwarning

The \textwarning macro generates a warning sign:

- 2.5 Front Matter, Titles, etc
- 2.6 Miscellaneous

## 3 Limitations

In this section we document known limitations. If you want to help alleviate them, please feel free to contact the package author. Some of them are currently discussed in the STFXGitHub repository [sTeX].

1. when option book which uses \pagestyle{headings} is given and semantic macros are given in the omgroup titles, then they sometimes are not defined by the time the heading is formatted. Need to look into how the headings are made. This is a problem of the underlying omdoc package.

## 4 The Implementation

## 4.1 Class and Package Options

We define some Package Options and switches for the mikoslides class and activate them by passing them on to beamer.cls and omdoc.cls and the mikoslides package. We pass the nontheorem option to the statements package when we are not in notes mode, since the beamer package has its own (overlay-aware) theorem environments.

- 1 (\*cls)
- 2 \RequirePackage{kvoptions}
- 3 \RequirePackage{etoolbox}
- 4 \SetupKeyvalOptions{family=mks@cls,prefix=mks@cls@}
- 5 \DeclareStringOption[article]{class}
- 6 \AddToKeyvalOption\*{class}{\PassOptionsToClass{class=\mks@cls@class}{omdoc}
  - \ifdefstring{\mks@cls@class}{book}{\PassOptionsToPackage{defaulttopsect=part}{mikoslides}}{}
  - \ifdefstring{\mks@cls@class}{report}{\PassOptionsToPackage{defaulttopsect=part}{mikoslides}}}
- 9 \DeclareBoolOption{notes}
- 10 \DeclareComplementaryOption{slides}{notes}
- 11 \DeclareDefaultOption{%
- 12 \PassOptionsToClass{\CurrentOption}{omdoc}
- 13 \PassOptionsToClass{\CurrentOption}{beamer}

```
\PassOptionsToPackage{\CurrentOption}{mikoslides}}
15 \ProcessKeyvalOptions{mks@cls}
16 \langle /cls \rangle
now we do the same for the mikoslides package.
17 (*package)
18 \RequirePackage{kvoptions}
19 \SetupKeyvalOptions{family=mks@sty,prefix=mks@sty@}
20 \DeclareStringOption{topsect}
21 \DeclareStringOption{defaulttopsect}
22 \DeclareBoolOption{mh}
23 \AddToKeyvalOption*{mh}{
    \PassOptionsToPackage{mh}{stex}
    \PassOptionsToPackage{mh}{smglom}
    \PassOptionsToPackage{mh}{tikzinput}}
27 \neq 27 
28 \DeclareBoolOption{notes}
29 \AddToKeyvalOption*{notes}{\notestrue\PassOptionsToPackage{notes}{\statements}}
30 \DeclareComplementaryOption{slides}{notes}
31 \AddToKeyvalOption*{slides}{\notesfalse\PassOptionsToPackage{nontheorem}{statements}}
32 \DeclareBoolOption{sectocframes}
33 \AddToKeyvalOption*{sectocframes}{\PassOptionsToPackage{msection}{statements}}
34 \DeclareBoolOption{frameimages}
35 \DeclareBoolOption{fiboxed}
36 \DeclareBoolOption{noproblems}
37 \DeclareDefaultOption{%
    \PassOptionsToPackage{\CurrentOption}{stex}
    \PassOptionsToPackage{\CurrentOption}{smglom}
39
    \PassOptionsToPackage{\CurrentOption}{tikzinput}}
41 \ProcessKeyvalOptions{mks@sty}
we give ourselves a macro \@Ctopsect that needs only be evaluated once, so that
the \ifdefstring conditionals work below.
42 \ifx\mks@sty@topsect\@empty\edef\@@topsect{\mks@sty@defaulttopsect}
43 \else\edef\@@topsect{\mks@sty@topsect}\fi
44 (/package)
   Depending on the options, we either load the article-based omdoc or the
beamer class (and set some counters).
45 (*cls)
46 \ifmks@cls@notes
47 \LoadClass{omdoc}
48 \else
   \LoadClass[10pt,notheorems,xcolor={dvipsnames,svgnames}]{beamer}
49
    \newcounter{Item}
50
    \newcounter{paragraph}
    \newcounter{subparagraph}
52
    \newcounter{Hfootnote}
53
54 \fi
```

now it only remains to load the mikoslides package that does all the rest.

```
55 \RequirePackage{mikoslides} 56 \langle / \text{cls} \rangle
```

In notes mode, we also have to make the beamer-specific things available to article via the beamerarticle package. We use options to avoid loading theorem-like environments, since we want to use our own from the STEX packages. The first batch of packages we want are loaded on mikoslides.sty. These are the general ones, we will load the STEX-specific ones after we have done some work (e.g. defined the counters m\*). Only the stex-logo package is already needed now for the default theme.

```
57 (*package)
58 \ifmks@sty@notes
59 \RequirePackage{a4wide}
60 \RequirePackage{marginnote}
61 \RequirePackage[dvipsnames, svgnames] {xcolor}
62 \RequirePackage{mdframed}
63 \RequirePackage[noxcolor,noamsthm]{beamerarticle}
64 \fi
65 \RequirePackage{etoolbox}
66 \RequirePackage{amssymb}
67 \RequirePackage{amsmath}
68 \RequirePackage{comment}
69 \RequirePackage{textcomp}
70 \RequirePackage{url}
71 \RequirePackage{graphicx}
72 \RequirePackage{stex-logo}
73 \RequirePackage{pgf}
74 \ifmks@sty@notes
75 \RequirePackage[bookmarks,bookmarksopen,bookmarksnumbered,breaklinks,
76 linkcolor=black,citecolor=black,urlcolor=cyan,filecolor=cyan,colorlinks]{hyperref}
77 \fi
```

finally, we require the metakeys package from STEX, so that we can use the \addmetakey mechanism.

78 \RequirePackage{metakeys}

## 4.2 Notes and Slides

For the lecture notes cases, we also provide the \usetheme macro that would otherwise from the the beamer class. While the latter loads beamertheme  $\langle theme \rangle$ .sty, the notes version loads beamernotestheme  $\langle theme \rangle$ .sty.

```
79 \verb|\ifmks@sty@notes||
```

80 \renewcommand\usetheme[2][]{\usepackage[#1]{beamernotestheme#2}}

81 \fi

We define the sizes of slides in the notes. Somehow, we cannot get by with the same here.

6

EdN:4

 $<sup>^4{\</sup>rm EDNote}\colon$  MK: This is not ideal, but I am not sure that I want to be able to provide the full theme functionality there.

```
82 \newcounter{slide}
83 \newlength{\slidewidth}\setlength{\slidewidth}{12.8cm}
84 \newlength{\slideheight}\setlength{\slideheight}{9cm}
```

note The note environment is used to leave out text in the slides mode. It does not have a counterpart in OMDoc. So for course notes, we define the note environment to be a no-operation otherwise we declare the note environment as a comment via the comment package.

```
85 \ifmks@sty@notes%

86 \renewenvironment{note}{\ignorespaces}{}%

87 \else%

88 \excludecomment{note}%

89 \fi%
```

We first set up the slide boxes in article mode. We set up sizes and provide a box register for the frames and a counter for the slides.

```
90 \ifmks@sty@notes

91 \newlength{\slideframewidth}

92 \setlength{\slideframewidth}{1.5pt}
```

frame We first define the keys.

```
93 \addmetakey{frame}{label}
94 \addmetakey[yes]{frame}{allowframebreaks}
95 \addmetakey{frame}{allowdisplaybreaks}
96 \addmetakey[yes]{frame}{fragile}
97 \addmetakey[yes]{frame}{shrink}
98 \addmetakey[yes]{frame}{squeeze}
99 \addmetakey[yes]{frame}{t}
```

We define the environment, read them, and construct the slide number and label.

```
100 \renewenvironment{frame}[1][]{%
101 \metasetkeys{frame}{#1}%
102 \stepcounter{slide}%
103 \def\@currentlabel{\theslide}%
104 \ifx\frame@label\@empty%
105 \else%
106 \label{\frame@label}%
107 \fi%
```

We redefine the itemize environment so that it looks more like the one in beamer.

```
\def\itemize@level{outer}%
108
       \def\itemize@outer{outer}%
109
110
       \def\itemize@inner{inner}%
       \renewcommand\newpage{}%
111
       \renewcommand\metakeys@show@keys[2]{\marginnote{{\scriptsize ##2}}}%
112
       \renewenvironment{itemize}{%
113
         \ifx\itemize@level\itemize@outer%
114
           \def\itemize@label{$\rhd$}%
115
116
         \fi%
117
         \ifx\itemize@level\itemize@inner%
```

```
\def\itemize@label{$\scriptstyle\rhd$}%
                          118
                                               \fi%
                          119
                                               \begin{list}%
                          120
                                               {\itemize@label}%
                          121
                                               {\setlength{\labelsep}{.3em}%
                          122
                          123
                                                 \setlength{\labelwidth}{.5em}%
                          124
                                                 \setlength{\leftmargin}{1.5em}%
                          125
                                               \edef\itemize@level{\itemize@inner}%
                          126
                                          }{%
                          127
                                               \end{list}%
                          128
                           129
                                           }%
                             We create the box with the mdframed environment from the equinymous package.
                                           \begin{mdframed}[linewidth=\slideframewidth,skipabove=1ex,skipbelow=1ex,userdefinedwidth=\s
                          130
                                      }{%
                          131
                          132
                                           \medskip\miko@slidelabel\end{mdframed}%
                          133
                                     }%
                                    Now, we need to redefine the frametitle (we are still in course notes mode).
\frametitle
                                      \renewcommand{\frametitle}[1]{{\Large\bf\sf\color{blue}{#1}}\medskip}%
                          135 \fi %ifnotes
                          We have to make sure that the width is overwritten, for that we check the
\frameimage
                             \Gin@ewidth macro from the graphicx package. We also add the label key.
                           136 \end{arabic{slide}} \label{\end{arabic{slide}}} \label{\end{arabic{slide}} \label{\end{arabic{slide}}} \label{\end{arabic{slide}}} \label{\end{arabic{slide}} \label{\end{arabic{slide}}} \label{\end{arabic{slide}}} \label{\end{arabic{slide}}} \label{\end{arabic{slide}} \label{\end{arabic{slide}}} \label{\end{arabic{slide}} \label{\end{arabic{slide}}} \labell{\end{arabic{slide}}} \labell{\end{arabic{slide}} \labell{\end{arabic{slide}}} \labell{\end{arabic{slide}}} \labell{\end{arabic{slide}}} \labell{\end{arabic{slide}} \labell{\end{arabic{slide}}} \labell{\end{arabic{slide}} \labell{\end{arabic{slide}}} \l
                           137 \newrobustcmd\frameimage[2][]{%
                          138
                                      \stepcounter{slide}%
                                      \ifmks@sty@frameimages%
                           139
                                           \def\Gin@ewidth{}\setkeys{Gin}{#1}%
                           140
                                           \ifmks@sty@notes\else\vfill\fi%
                          141
                                           \ifmks@sty@fiboxed%
                          142
                                               143
                           144
                                           \else
                                               \label{linear_condition} $$ \left( \frac{1}{42} \right) = \frac{1}{42} . $$
                          145
                           146
                                           \par\strut\hfill{\footnotesize Slide \arabic{slide}}%
                          147
                          148
                                           \ifmks@sty@notes\else\vfill\fi%
                          149
                                      \fi % ifmks@sty@frameimages
                          150 }
           \pause
                          151 \ifmks@sty@notes\newcommand\pause{}\fi
        nomtext
                           152 \ifmks@sty@notes\newenvironment{nomtext}[1][]{\begin{omtext}[#1]}{\end{omtext}}%
                           153 \else\excludecomment{nomtext}\fi%
                                  <sup>5</sup>EDNOTE: MK: fake it in notes mode for now
```

EdN:5

nomgroup

154 \ifmks@sty@notes\newenvironment{nomgroup}[2][]{\begin{omgroup}[#1]{#2}}{\end{omgroup}}% 155 \else\excludecomment{nomgroup}\fi%

#### 4.3 **Header and Footer Lines**

Now, we set up the infrastructure for the footer line of the slides, we use boxes for the logos, so that they are only loaded once, that considerably speeds up processing.

\setslidelogo

The default logo is the logo of Jacobs University. Customization can be done by  $\sline {logo {\langle logo name \rangle}}.$ 

```
156 \newlength{\slidelogoheight}
157 \ifmks@sty@notes%
158
     \verb|\setlength{\slidelogoheight}{.4cm}||
159 \else%
160
    \setlength{\slidelogoheight}{1cm}%
161 \fi%
162 \newsavebox{\slidelogo}%
163 \sbox{\slidelogo}{\sTeX}%
164 \newrobustcmd{\setslidelogo}[1]{%
165 \quad \texttt{\slidelogo}{\texttt{\lineludegraphics[height=\slidelogoheight]\{\#1\}\}\%}
```

\setsource

166 }%

\source stores the writer's name. By default it is Michael Kohlhase since he is the main user and designer of this package.  $\$  can change the writer's name.

```
167 \def\source{Michael Kohlhase}% customize locally
168 \newrobustcmd{\setsource}[1]{\def\source{#1}}%
```

\setlicensing Now, we set up the copyright and licensing. By default we use the Creative Commons Attribuition-ShareAlike license to strengthen the public domain. If package hyperref is loaded, then we can attach a hyperlink to the license logo. \setlicensing[ $\langle url \rangle$ ] { $\langle logo\ name \rangle$ } is used for customization, where  $\langle url \rangle$  is optional.

```
169 \def\copyrightnotice{\footnotesize\copyright:\hspace{.3ex}{\source}}%
170 \newsavebox{\cclogo}%
171 \sbox{\cclogo}{\includegraphics[height=\slidelogoheight]{cc_somerights}}%
172 \newif\ifcchref\cchreffalse%
173 \AtBeginDocument{%
174
     \@ifpackageloaded{hyperref}{\cchreftrue}{\cchreffalse}
175 }%
176 \def\licensing{%
     \ifcchref%
177
       \href{http://creativecommons.org/licenses/by-sa/2.5/}{\usebox{\cclogo}}%
178
179
       {\usebox{\cclogo}}%
180
    \fi%
181
```

```
183 \newrobustcmd{\setlicensing}[2][]{%
                  \def\@url{#1}%
             184
                  \sbox{\cclogo}{\includegraphics[height=\slidelogoheight]{#2}}%
             185
                  \ifx\@url\@empty%
             186
             187
                     \def\licensing{{\usebox{\cclogo}}}%
             188
                  \else%
                     \def\licensing{%
             189
                      \ifcchref%
             190
                      \href{#1}{\usebox{\cclogo}}%
             191
             192
                      \else%
             193
                      {\usebox{\cclogo}}%
             194
                      \fi%
                    }%
             195
             196
                  \fi%
             197 }%
\slidelabel Now, we set up the slide label for the article mode.<sup>6</sup>
             198 \newrobustcmd\miko@slidelabel{%
                  \vbox to \slidelogoheight{%
             199
             200
                    \vss\hbox to \slidewidth%
                    {\licensing\hfill\copyrightnotice\hfill\arabic{slide}\hfill\usebox{\slidelogo}}%
             202
                  }%
             203 }%
```

## 4.4 Colors and Highlighting

We first specify sans serif fonts as the default.

```
204\sffamily
```

182 }%

EdN:6

Now, we set up an infrastructure for highlighting phrases in slides. Note that we use content-oriented macros for highlighting rather than directly using color markup. The first thing to to is to adapt the green so that it is dark enough for most beamers

```
205 \AtBeginDocument{% 206 \definecolor{green}{rgb}{0,.5,0}% 207 \definecolor{purple}{cmyk}{.3,1,0,.17}% 208 }%
```

We customize the \defemph, \notemph, and \stDMemph macros with colors for the use in the statements package. Furthermore we customize the \@@lec macro for the appearance of line end comments in \lec.

```
209 % \def\STpresent#1{\textcolor{blue}{#1}}
210 \def\defemph#1{{\textcolor{magenta}{#1}}}
211 \def\notemph#1{{\textcolor{magenta}{#1}}}
212 \def\stDMemph#1{{\textcolor{blue}{#1}}}
213 \def\@@lec#1{(\textcolor{green}{#1})}
```

 $<sup>^6\</sup>mathrm{EdNote}$  see that we can use the themes for the slides some day. This is all fake.

I like to use the dangerous bend symbol for warnings, so we provide it here.

\textwarning as the macro can be used quite often we put it into a box register, so that it is only loaded once.

```
214 \pgfdeclareimage[width=.8em] \{miko@small@dbend} \{dangerous-bend}
215 \def\smalltextwarning{%
     \pgfuseimage{miko@small@dbend}%
     \xspace%
217
218 }%
219 \pgfdeclareimage[width=1.2em] \miko@dbend} \{dangerous-bend}
220 \newrobustcmd\textwarning{%
     \raisebox{-.05cm}{\pgfuseimage{miko@dbend}}%
     \xspace%
222
223 }%
224 \pgfdeclareimage[width=2.5em]{miko@big@dbend}{dangerous-bend}{\%}
225 \newrobustcmd\bigtextwarning{%
    \raisebox{-.05cm}{\pgfuseimage{miko@big@dbend}}%
227 \xspace%
228 }%
229 \newrobustcmd\putgraphicsat[3]{%
230 \begin{picture}(0,0)\put(#1){\includegraphics[#2]{#3}}\end{picture}%
231 }%
232 \newrobustcmd\putat[2]{%
233 \begin{picture}(0,0)\put(#1){#2}\end{picture}%
234 }%
```

## 4.5 Sectioning

If the sectocframes option is set, then we make section frames. We first define a set of counters<sup>7</sup>

```
235 \ifmks@sty@sectocframes%
236 \ifdefstring\@@topsect{part}{%
237 \newcounter{mpart}\newcounter{mchapter}\newcounter{msection}[mchapter]}
238 {\ifdefstring\@@topsect{chapter}{%
239 \newcounter{mchapter}\newcounter{msection}[mchapter]}
240 {\newcounter{msection}}}
241 \newcounter{msubsection}[msection]%
242 \newcounter{msubsubsection}[msubsection]%
243 \newcounter{msubsubsection}[msubsubsection]%
244 \fi% ifsectocframes
```

Now that we have defined the counters, we can load the STEX-specific packages (in particular statements that needs these counters).

```
245 \RequirePackage{stex}
246 \RequirePackage{smglom}
247 \RequirePackage{tikzinput}
248 \ifmks@sty@mh\RequirePackage{mikoslides-mh}\fi
```

 $<sup>^7\</sup>mathrm{EdNote}\colon$  I forget: why not use the counters from beamer/article? –¿ document this.

\section@level Finally, we set the \section@level macro that governs sectioning.

```
249 \section@level=2
251 \ \texttt{\chapter}{\texttt{\chapter}{\chapter}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{\chapter}}{\texttt{
252 \ifmks@sty@notes\else% only in slides
253 \def\part@prefix{\ifdefstring\@@topsect{part}{\arabic{mchapter}.}{}}
254 \renewenvironment{omgroup}[2][]{%
                                   \metasetkeys{omgroup}{#1}\sref@target%
255
256
                                   \advance\section@level by 1%
                                   \ifmks@sty@sectocframes%
257
                                   \stepcounter{slide}
258
259
                                    \begin{frame} [noframenumbering]%
                                   \vfill\Large\centering%
260
                                   \red{%
 261
                                                    \ifcase\section@level\or
262
263
                                                    \stepcounter{mpart}
                                                    \def\@@label{Part \Roman{mpart}}
264
                                                  \def\currentsectionlevel{part}
265
266
                                                    \or%
267
                                                    \stepcounter{mchapter}
                                                    \def\@@label{Chapter \arabic{mchapter}}
 268
269
                                                    \def\currentsectionlevel{chapter}
270
                                                  \or
271
                                                  \stepcounter{msection}
272
                                                    \def\@@label{\part@prefix\arabic{msection}}
273
                                                    \def\currentsectionlevel{section}
274
                                                    \stepcounter{msubsection}
 275
276
                                                    \def\@@label{\part@prefix\arabic{msection}.\arabic{msubsection}}
277
                                                    \def\currentsectionlevel{subsection}
278
                                                  \or
                                                  \stepcounter{msubsubsection}
279
280
                                                    \label{partoprefix} $$ \left( \sum_{x \in \mathbb{R}} \left( \sum_
 281
                                                  \def\currentsectionlevel{subsubsection}
282
                                                  \or
283
                                                  \stepcounter{msubsubsection}
284
                                                    \label{partQprefix\arabic\{msection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubsection\}.\arabic\{msubs
285
                                                    \def\currentsectionlevel{subsubsection}
                                                    \fi% end ifcase
286
                                                    \@@label\sref@label@id\@@label
287
288
                                                  \quad #2%
                                   }%
289
                                   \vfill%
290
291
                                    \end{frame}%
292
                                   \fi %ifmks@sty@sectocframes
293 }
294 {\advance\section@level by -1}%
295 \fi% ifmks@sty@notes
```

#### \inputref\*

```
296 \let\orig@inputref\inputref
297 \def\inputref{\@ifstar\ninputref\orig@inputref}
298 \newcommand\ninputref[2][]{\ifmks@sty@notes\orig@inputref[#1]{#2}\fi}
```

#### 4.6 Miscellaneous

We set up a beamer template for theorems like ams style, but without a block environment.

```
299 \def\inserttheorembodyfont{\normalfont}
300 \defbeamertemplate{theorem begin}{miko}
301 {\inserttheoremheadfont\inserttheoremname\inserttheoremnumber
302 \ifx\inserttheoremaddition\@empty\else\ (\inserttheoremaddition)\fi%
303 \inserttheorempunctuation\inserttheorembodyfont\xspace}
304 \defbeamertemplate{theorem end}{miko}{}
and we set it as the default one.
305 \setbeamertemplate{theorems}[miko]
```

The following fixes an error I do not understand, this has something to do with beamer compatibility, which has similar definitions but only up to 1.

```
306 \expandafter\def\csname Parent2\endcsname{}
```

We need to disregard the columns macros introduced by the beamer class in the notes.

```
307 \ifmks@sty@notes%
     \renewenvironment{columns}[1][]{%
       \par\noindent%
309
310
       \begin{minipage}%
311
       \slidewidth\centering\leavevmode%
     }{%
312
313
       \end{minipage}\par\noindent%
314
     }%
315
     \newsavebox\columnbox%
316
     \renewenvironment<>{column}[2][]{%
317
       \begin{lrbox}{\columnbox}\begin{minipage}{#2}%
318
     }{%
       \end{minipage}\end{lrbox}\usebox\columnbox%
319
     }%
320
321 \fi% ifnotes
322 \ifmks@sty@noproblems%
     \newenvironment{problems}{}{}%
324 \else%
     \excludecomment{problems}%
325
326 \fi%
327 (/package)
```

## **Change History**

v0.1	the frame environment in notes
General: Initial Version 1	mode 1
v0.2	numbered sectocframes 1
General: course notes back on	this is almost done 1
seminar 1	v1.0
v0.3	General: adding \frameimage 1
General: changing to Jacobs logo . 1	9 (
v0.4	v1.1
General: moving line-end-comment	General: moving MathHub support
to $\mathtt{omdoc.dtx}$ 1	out to separate package 1
re-basing the whole thing on	reinterpreting omgroup 1
beamer 1	Removing the old title macros
v0.5	
General: eliminating	(use the regular ones instead) . 1
mytwocolumns, this is better	v1.2
done by beamer.cls $\dots 1$	General: changed to keyval
v0.9	class/package options, allowed
General: basic options handling for	arbitrary classes 1
2	·
D. C	

## References

- [CR99] David Carlisle and Sebastian Rathz. The graphicxl package. Part of the TEX distribution. The Comprehensive TEX Archive Network. 1999. URL: https://www.tug.org/texlive/devsrc/Master/texmf-dist/doc/latex/graphics/graphicx.pdf.
- [Koh16] Michael Kohlhase. metakeys.sty: A generic framework for extensible Metadata in LATEX. Tech. rep. Comprehensive TeX Archive Network (CTAN), 2016. URL: http://mirror.ctan.org/macros/latex/contrib/stex/sty/metakeys/metakeys.pdf.
- [sTeX] KWARC/sTeX. URL: https://github.com/KWARC/sTeX (visited on 05/15/2015).
- [Tana] Till Tantau. beamer A LaTeX class for producing presentations and slides. URL: http://ctan.org/pkg/beamer (visited on 01/07/2014).
- [Tanb] Till Tantau. User Guide to the Beamer Class. URL: http://ctan.org/macros/latex/contrib/beamer/doc/beameruserguide.pdf.