# Slides and Course Notes\*

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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

• If the option frameimages is set, then slide mode also shows the \frameimage-generated frames.

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 note

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

 $<sup>^{1}\</sup>mathrm{EdNote}$ : leaving out noproblems for the moment until we decide what to do with it.

 $<sup>^2\</sup>mathrm{EdNote}$ : 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  $\frac{\langle opt \rangle}{\langle path \rangle}$ , where  $\langle opt \rangle$  are the options of  $\frac{\langle opt \rangle}{\langle opt \rangle}$  and  $\frac{\langle path \rangle}{\langle opt \rangle}$  is the file path (extension can be left off like in  $\frac{\langle opt \rangle}{\langle opt \rangle}$ ).

\frameimage

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

\inputref\* \

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

nomgroup

<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.

#### 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 STEXGitHub 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{topsect=part}{mikoslides}}{}
    \ifdefstring{\mks@cls@class}{report}{\PassOptionsToPackage{topsect=part}{mikoslides}}}{}
9 \DeclareBoolOption{notes}
10 \DeclareComplementaryOption{slides}{notes}
11 \DeclareDefaultOption{\PassOptionsToClass{\CurrentOption}{omdoc}
    \PassOptionsToClass{\CurrentOption}{beamer}
    \PassOptionsToPackage{\CurrentOption}{mikoslides}}
14 \ProcessKeyvalOptions{mks@cls}
15 \langle /cls \rangle
now we do the same for the mikoslides package.
16 (*package)
```

```
17 \RequirePackage{kvoptions}
18 \SetupKeyvalOptions{family=mks@sty,prefix=mks@sty@}
19 \DeclareStringOption[section] {topsect}
20 \DeclareBoolOption{mh}
21 \AddToKeyvalOption*{mh}{
    \PassOptionsToPackage{mh}{stex}
    \PassOptionsToPackage{mh}{smglom}
    \PassOptionsToPackage{mh}{tikzinput}}
25 \newif\ifnotes\notestrue
26 \DeclareBoolOption{notes}
27 \AddToKeyvalOption*{notes}{\notestrue\PassOptionsToPackage{notes}{\statements}}
28 \DeclareComplementaryOption{slides}{notes}
29 \AddToKeyvalOption*{slides}{\notesfalse\PassOptionsToPackage{nontheorem}{statements}}
30 \DeclareBoolOption{sectocframes}
{\tt 31 \AddToKeyvalOption*\{sectocframes\}\{\PassOptionsToPackage\{msection\}\{statements\}\}\}}
32 \DeclareBoolOption{frameimages}
33 \DeclareBoolOption{noproblems}
34 \DeclareDefaultOption{\PassOptionsToPackage{\CurrentOption}{stex}
                              \PassOptionsToPackage{\CurrentOption}{smglom}
                              \PassOptionsToPackage{\CurrentOption}{tikzinput}}
37 \ProcessKeyvalOptions{mks@sty}
38 (/package)
   Depending on the options, we either load the article-based omdoc or the
beamer class (and set some counters).
39 (*cls)
40 \ifmks@cls@notes
41 \LoadClass{omdoc}
42 \else
43 \LoadClass[10pt,notheorems]{beamer}
    \newcounter{Item}
44
    \newcounter{paragraph}
45
    \newcounter{subparagraph}
46
    \newcounter{Hfootnote}
47
now it only remains to load the mikoslides package that does all the rest.
49 \RequirePackage{mikoslides}
50 (/cls)
   In notes mode, we also have to make the beamer-specific things available
```

```
51 (*package)
52 \ifmks@sty@notes
53 \RequirePackage{a4wide}
```

```
EdN:3
```

```
54 \RequirePackage{marginnote}
55 \RequirePackage{xcolor}
56 \RequirePackage{mdframed}
57 \RequirePackage[noxcolor,noamsthm]{beamerarticle}
58 \fi
59 \ensuremath{\mbox{\sc NequirePackage}} \{ etoolbox \}
60 \RequirePackage{amssymb}
61 \RequirePackage{amsmath}
62 \RequirePackage{comment}
63 \RequirePackage{textcomp}
64 \RequirePackage{url}
65 \RequirePackage{graphicx}
66 \RequirePackage{stex-logo}
67 \RequirePackage{pgf}
68 \ifmks@sty@notes
69 \RequirePackage[bookmarks,bookmarksopen,bookmarksnumbered,breaklinks,
70 linkcolor=black,citecolor=black,urlcolor=cyan,filecolor=cyan,colorlinks]{hyperref}
71 \fi
```

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

72 \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.

```
73 \ifmks@sty@notes
74 \renewcommand\usetheme[2][]{\usepackage[#1]{beamernotestheme#2}}
75 \fi
```

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

```
76 \newcounter{slide}
77 \newlength{\slidewidth}\setlength{\slidewidth}{12.8cm}
78 \newlength{\slideheight}\setlength{\slideheight}{9cm}
```

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.

```
79 \ifmks@sty@notes%
80 \renewenvironment{note}{\ignorespaces}{}%
81 \else%
82 \excludecomment{note}%
83 \fi%
```

 $<sup>^3{\</sup>rm EDNote}\colon$  MK: This is not ideal, but I am not sure that I want to be able to provide the full theme functionality there.

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.

```
84 \ifmks@sty@notes
           \newlength{\slideframewidth}
           \setlength{\slideframewidth}{1.5pt}
       We first define the keys.
frame
       87
           \addmetakey{frame}{label}
       88
           \addmetakey[yes]{frame}{allowframebreaks}
           \addmetakey{frame}{allowdisplaybreaks}
       89
       90
           \addmetakey[yes]{frame}{fragile}
           \addmetakey[yes]{frame}{shrink}
       91
           \addmetakey[yes]{frame}{squeeze}
           \addmetakey[yes]{frame}{t}
       93
       We define the environment, read them, and construct the slide number and label.
       94
            \renewenvironment{frame}[1][]{%
              \metasetkeys{frame}{#1}%
       95
              \stepcounter{slide}%
       96
       97
              \def\@currentlabel{\theslide}%
       98
              \ifx\frame@label\@empty%
       99
              \else%
      100
                \label{\frame@label}%
              \fi%
      101
       We redefine the itemize environment so that it looks more like the one in beamer.
              \def\itemize@level{outer}%
              \def\itemize@outer{outer}%
      103
              \def\itemize@inner{inner}%
      104
              \renewcommand\newpage{}%
      105
              \renewcommand\metakeys@show@keys[2]{\marginnote{{\scriptsize ##2}}}%
      106
      107
              \renewenvironment{itemize}{%
      108
                \ifx\itemize@level\itemize@outer%
                  \def\itemize@label{$\rhd$}%
      109
                \fi%
      110
                \ifx\itemize@level\itemize@inner%
      111
                  \def\itemize@label{$\scriptstyle\rhd$}%
      112
      113
                \fi%
      114
                \begin{list}%
                {\itemize@label}%
      115
      116
                {\setlength{\labelsep}{.3em}%
                 \setlength{\labelwidth}{.5em}%
      117
                 \setlength{\leftmargin}{1.5em}%
      118
      119
      120
                \edef\itemize@level{\itemize@inner}%
      121
              }{%
      122
                \end{list}%
      123
```

We create the box with the mdframed environment from the equinymous package.

```
\begin{mdframed} [linewidth=\slideframewidth, skipabove=1ex, skipbelow=1ex, userdefinedwidth=\s
              124
                    }{%
              125
                      \medskip\miko@slidelabel\end{mdframed}%
              126
                    }%
              127
                   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}%
              129 \fi %ifnotes
               We have to make sure that the width is overwritten, for that we check the
               \Gin@ewidth macro from the graphicx package<sup>4</sup>
               130 \newrobustcmd\frameimage[2][]{%
                    \stepcounter{slide}%
                    \ifmks@sty@frameimages%
              132
                      \def\Gin@ewidth{}\setkeys{Gin}{#1}%
              133
                      \ifmks@sty@notes\else\vfill\fi%
              134
                      \ifx\Gin@ewidth\@empty%
              135
                        \mycgraphics[width=\slidewidth,#1]{#2}\else\mycgraphics[#1]{#2}%
              136
               137
                      \par\strut\hfill{\footnotesize Slide \arabic{slide}}%
               138
              139
                      \ifmks@sty@notes\else\vfill\fi%
                    \fi%
              140
              141 }% ifmks@sty@frameimages
       \pause
              142 \ifmks@sty@notes\newcommand\pause{}\fi
      nomtext
              143 \ifmks@sty@notes\newenvironment{nomtext}[1][]{\begin{omtext}[#1]}{\end{omtext}}}%
              144 \else\excludecomment{nomtext}\fi%
     nomgroup
               145 \ifmks@sty@notes\newenvironment{nomgroup}[2][]{\begin{omgroup}[#1] {#2}}{\end{omgroup}}}%
               146 \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
                \setslidelogo\{\langle logo \ name \rangle\}.
               147 \newlength{\slidelogoheight}
```

EdN:4

EdN:5

 $^4\mathrm{EdNote}$ : MK@DG; we need to do that in the LaTeXML binding as well!

<sup>5</sup>EDNOTE: MK: fake it in notes mode for now

```
\setlength{\slidelogoheight}{.4cm}%
               150 \else%
                    \setlength{\slidelogoheight}{1cm}%
               151
               152 \fi%
               153 \newsavebox{\slidelogo}%
               154 \sbox{\slidelogo}{\sTeX}%
               155 \newrobustcmd{\setslidelogo}[1]{%
                    \sbox{\slidelogo}{\includegraphics[height=\slidelogoheight]{#1}}%
               157 }%
               \source stores the writer's name. By default it is Michael Kohlhase since he is
   \setsource
                the main user and designer of this package. \setsource\{\langle name \rangle\} can change the
                writer's name.
               158 \def\source{Michael Kohlhase}% customize locally
               159 \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 op-
                tional.
               160 \def\copyrightnotice{\footnotesize\copyright:\hspace{.3ex}{\source}}%
               161 \newsavebox{\cclogo}%
               162 \sbox{\cclogo}{\includegraphics[height=\slidelogoheight]{cc_somerights}}%
               163 \newif\ifcchref\cchreffalse%
               164 \AtBeginDocument{%
               165
                    \@ifpackageloaded{hyperref}{\cchreftrue}{\cchreffalse}
               166 }%
               167 \def\licensing{%
               168
                    \ifcchref%
                       \href{http://creativecommons.org/licenses/by-sa/2.5/}{\usebox{\cclogo}}%
               169
               170
                    \else%
               171
                       {\usebox{\cclogo}}%
                    \fi%
               172
               173 }%
               174 \newrobustcmd{\setlicensing}[2][]{%
                    \def\@url{#1}%
               175
                    \sbox{\cclogo}{\includegraphics[height=\slidelogoheight]{#2}}%
               176
                    \ifx\@url\@empty%
               177
                       \def\licensing{{\usebox{\cclogo}}}%
               178
               179
                    \else%
               180
                       \def\licensing{%
                         \ifcchref%
               181
                         \href{#1}{\usebox{\cclogo}}%
               182
               183
                         \else%
                         {\usebox{\cclogo}}%
               184
                         \fi%
               185
                       }%
               186
```

148 \ifmks@sty@notes%

```
187 \fi%
188 }%
```

EdN:6 \slidelabel Now, we set up the slide label for the article mode.<sup>6</sup>

```
189 \newrobustcmd\miko@slidelabel{%
     \vbox to \slidelogoheight{%
190
       \vss\hbox to \slidewidth%
191
       {\licensing\hfill\copyrightnotice\hfill\arabic{slide}\hfill\usebox{\slidelogo}}}
192
193
194 }%
```

#### Colors and Highlighting 4.4

We first specify sans serif fonts as the default.

```
195 \sffamily
```

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

```
196 \AtBeginDocument{%
197 \definecolor{green}{rgb}{0,.5,0}%
198 \definecolor{purple}{cmyk}{.3,1,0,.17}%
199 }%
```

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.

```
200 % \def\STpresent#1{\textcolor{blue}{#1}}
201 \def\defemph#1{{\textcolor{magenta}{#1}}}
202 \def\notemph#1{{\textcolor{magenta}{#1}}}
203 \def\stDMemph#1{{\textcolor{blue}{#1}}}
204 \def\@@lec#1{(\textcolor{green}{#1})}
```

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.

```
205 \pgfdeclareimage[width=.8em]{miko@small@dbend}{dangerous-bend}
206 \def\smalltextwarning{%
     \pgfuseimage{miko@small@dbend}%
208
     \xspace%
209 }%
210 \pgfdeclareimage[width=1.2em]{miko@dbend}{dangerous-bend}
211 \newrobustcmd\textwarning{%
     \raisebox{-.05cm}{\pgfuseimage{miko@dbend}}%
213
     \xspace%
214 }%
```

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

```
215 \pgfdeclareimage[width=2.5em] {miko@big@dbend} {dangerous-bend}%
216 \newrobustcmd\bigtextwarning{%
217 \raisebox{-.05cm} {\pgfuseimage{miko@big@dbend}}%
218 \xspace%
219 }%
220 \newrobustcmd\putgraphicsat[3] {%
221 \begin{picture}(0,0)\put(#1) {\includegraphics[#2] {#3}}\end{picture}%
222 }%
223 \newrobustcmd\putat[2] {%
224 \begin{picture}(0,0)\put(#1) {#2}\end{picture}%
225 }%
```

#### 4.5 Sectioning

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

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

```
236 \RequirePackage{stex}
237 \RequirePackage{smglom}
238 \RequirePackage{tikzinput}
239 \ifmks@sty@mh\RequirePackage{mikoslides-mh}\fi
```

\section@level

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

```
240 \section@level=2
241 \ifdefstring{\mks@sty@topsect}{part}{\section@level=0}{}
242 \ifdefstring{\mks@sty@topsect}{chapter}{\section@level=1}{}
```

Now STEXis loaded, we redefine the omgroup environment to produce section toc frames (if the option sectocframes is specified.)<sup>8</sup>

```
243 \ifmks@sty@notes\else% only in slides
244 \def\part@prefix{\ifdefstring\mks@sty@topsect{part}{\arabic{mchapter}.}{}}
```

EdN:8

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

<sup>&</sup>lt;sup>8</sup>EDNOTE: MK: we should probably just redefine omgroup@num and omgroup@nonum, since they do the actual work so that we can add the sectocframes behavior here without having to copy the internals. Then there is less material that can get out of sync. Additionally, we should have a hook in the original code of those so that we can increment the slides counter in notes node (to keep slides in sync)

```
245 \renewenvironment{omgroup}[2][]{%
                \metasetkeys{omgroup}{#1}\sref@target%
           246
                \advance\section@level by 1%
           247
                \ifmks@sty@sectocframes%
           248
                \stepcounter{slide}
           249
           250
                \begin{frame} [noframenumbering] %
           251
                \vfill\Large\centering%
           252
                \red{%
                  \ifcase\section@level\or
           253
                  \stepcounter{mpart}
           254
                  \def\@@label{Part \Roman{mpart}}
           255
           256
                  \def\currentsectionlevel{part}
           257
                  \or%
                  \stepcounter{mchapter}
           258
                  \def\@@label{Chapter \arabic{mchapter}}
           259
                  \def\currentsectionlevel{chapter}
           260
           261
                  \stepcounter{msection}
           262
           263
                  \def\@@label{\part@prefix\arabic{msection}}
           264
                  \def\currentsectionlevel{section}
           265
                  \stepcounter{msubsection}
           266
                  \def\@@label{\part@prefix\arabic{msection}.\arabic{msubsection}}
           267
                  \def\currentsectionlevel{subsection}
           268
           269
           270
                  \stepcounter{msubsubsection}
                  271
                  \def\currentsectionlevel{subsubsection}
           272
           273
                  \stepcounter{msubsubsection}
           274
                  \def\@@label{\part@prefix\arabic{msection}.\arabic{msubsection}.\arabic{msubsection}.\arabic{msubsection}.
           275
           276
                  \def\currentsectionlevel{subsubsubsection}
           277
                  \fi% end ifcase
                  \@@label\sref@label@id\@@label
           278
           279
                  \quad #2%
               }%
           280
                \vfill%
           281
           282
                \end{frame}%
           283
                \fi %ifmks@sty@sectocframes
           284 }
           285 {\advance\section@level by -1}%
           286 fi\% ifmks@sty@notes
\inputref*
           287 \let\orig@inputref\inputref
           288 \def\inputref{\@ifstar\ninputref\orig@inputref}
           289 \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.

```
290 \def\inserttheorembodyfont{\normalfont}
291 \defbeamertemplate{theorem begin}{miko}
292 {\inserttheoremheadfont\inserttheoremname\inserttheoremnumber
     \ifx\inserttheoremaddition\@empty\else\ (\inserttheoremaddition)\fi%
     \verb|\insert theorem punctuation| insert theorem body font \verb|\xspace|| \\
294
295 \defbeamertemplate{theorem end}{miko}{}
 and we set it as the default one.
```

296 \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.

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

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

```
298 \ifmks@sty@notes%
     \renewenvironment{columns}[1][]{%
299
300
        \par\noindent%
        \begin{minipage}%
301
302
        \slidewidth\centering\leavevmode%
303
     }{%
        \end{minipage}\par\noindent%
304
     }%
305
     \newsavebox\columnbox%
306
307
     \renewenvironment<>{column}[2][]{%
        \begin{lrbox}{\columnbox}\begin{minipage}{#2}%
308
     }{%
309
        \end{minipage}\end{lrbox}\usebox\columnbox%
310
     }%
311
312 \fi% ifnotes
313 \ifmks@sty@noproblems%
     \newenvironment{problems}{}{}%
315 \else%
     \excludecomment{problems}%
316
317 \fi%
318 \langle /package \rangle
```

## **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	

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