CZECH TECHNICAL
UNIVERSITY
IN PRAGUE

F3 Faculty of Electrical Engineering
Department of Mathematics

CTUslides

simple slides in CTUstyle design using OpTEX

Petr Olšák

petr@olsak.net

http://petr.olsak.net/ctustyle.html

Basics

- The document is included in a file (say `file.tex`) and it can be processed by `optex file` command.
- The header of the document should be:

```
\input ctustyle3  % CTUstyle macro for OpTeX
\slides           % slides initialization
\worktype[B/EN]   % type of the work (B,M,D,O) and language (CZ,SK,EN)
\faculty{F3}      % the faculty in short
\department {Department of Mathematics} % department

\slideshow        % begin of the document
... document ...
\pg.
```

- The document must be finished by `\pg` followed by period.
- You need OpTeX in the version Jun 2020 or newer. See http://petr.olsak.net/optex.
- The work type should be set similarly as in **CTUstyle**.
- Only `\worktype`, `\faculty` and `\department` work here. No more declaration sequences from **CTUstyle**.

The structural commands

- You can type * for starting of the item.
- Nested items lists (second and more level) are created in the `\begitems...\enditems` environments.
- The slide titles are created by `\sec Text` followed by end of line. For subsections, you can use `\secc Text` similarly.
- The title page (first slide) can be special if `\tit Title` (followed by end of line) is used here.
- The `\subtit Author name etc.` (followed by end of line) can be used after `\tit` at the first slide.
- The paragraph texts are ragged right.
- You can use `\nl` for new line in the paragraph or titles.
- You can use `\pg` followed by + or ; or . for new slide.
- The page-bar in the right corner is clickable and it will be created correctly after second pass of the TEX run.

Next page (next slide)

- The control sequence \pg must be followed by:
  - the character + – next page keeps the same text and a next text is added (usable for partially uncovering of ideas),

Next page (next slide)

- The control sequence \pg must be followed by:
  - the character + – next page keeps the same text and a next text is added (usable for partially uncovering of ideas),
  - the character ; – normal next page,

Next page (next slide)

- The control sequence \pg must be followed by:
  - the character + – next page keeps the same text and a next text is added (usable for partially uncovering of ideas),
  - the character ; – normal next page,
  - the character . – the end of the document.

Next page (next slide)

- The control sequence \pg must be followed by:
  - the character + – next page keeps the same text and a next text is added (usable for partially uncovering of ideas),
  - the character ; – normal next page,
  - the character . – the end of the document.
- Summary:

```
\pg+    ... uncover next text
\pg;    ... next page
\pg.    ... the end of the document
```

Next page (next slide)

- The control sequence \pg must be followed by:
  - the character + – next page keeps the same text and a next text is added (usable for partially uncovering of ideas),
  - the character ; – normal next page,
  - the character . – the end of the document.
- Summary:

```
\pg+    ... uncover next text
\pg;    ... next page
\pg.    ... the end of the document
```

- If the control sequence \slideshow is removed (or commented out) from the beginning of the document then \pg+ sequences are deactivated. This is usable for printing version of the document.

Verbatim

Verbatim in paragraph

5+

- Unlike **CTUstyle** for OPmac, you can use `"code text"` inside paragraph directly.
- If you declare `\activettchar`` before `\slides` then you can use `` `code text` `` like in Markdown.
- You can use `\code{text}` too.
- All these features are described in OpTEX documentation.

Verbatim

Verbatim in paragraph

- Unlike **CTUstyle** for OPmac, you can use `"code text"` inside paragraph directly.
- If you declare `\activettchar`` before `\slides` then you can use `` `code text` `` like in Markdown.
- You can use `\code{text}` too.
- All these features are described in OpTEX documentation.

Multi-line verbatim

- Unlike **CTUstyle** for OPmac, you can use the pair `\begtt...\endtt` directly as described in OpTEX documentation. No `\pg=` is needed.
- Of course, you can use `\verbinut` too, if you want.

Example of multi-line verbatim

The source code includes:

```
\begtt \hisyntac{C}
#include <stdio.h>
int main(); // This is a program in C
{
  printf("Hello world!\n");
}
\endtt
```

Example of multi-line verbatim

The source code includes:

```
\begtt \hisyntac{C}
#include <stdio.h>
int main(); // This is a program in C
{
  printf("Hello world!\n");
}
\endtt
```

and the result is:

```
#include <stdio.h>
int main(); // This is a program in C
{
  printf("Hello world!\n");
}
```

Note that local declarations can be inserted after `\begtt`**, the** `\hisyntax` **declaration is used in the example here.**

Limits of the \pg+ sequence

- The \pg+ sequence cannot be used inside a group.
- The exception is the nested environment \begitems...\enditems.

Limits of the \pg+ sequence

- The \pg+ sequence cannot be used inside a group.
- The exception is the nested environment \begitems...\enditems.

What to do?

- If you need to partially uncover the multi-line verbatim then you can use:

```
\begtt
... first line of the code ...
\endtt
\par\pg+ \vskip-6.75pt
\begtt
... second line of the code ...
\endtt
```

Limits of the \pg+ sequence

- The \pg+ sequence cannot be used inside a group.
- The exception is the nested environment \begitems...\enditems.

What to do?

- If you need to partially uncover the multi-line verbatim then you can use:

```
\begtt
... first line of the code ...
\endtt
\par\pg+ \vskip-6.75pt
\begtt
... second line of the code ...
\endtt
```

- If you need to uncover the texts more ingenious then you can use \layers...\endlayers environment (see next slide...)

Uncovering by \layers, \pshow

- You can declare layers inside a slide by \layers *n* ... \endlayers pair. The number *n* declares the number of layers.
- The page with \layers...\endlayers pair is repeated *n*-times.
- You can use \pshow *k* inside \layers...\endlayers environment. This macro means *partially show*. It prints the following text to the end of current group:
  - invisible, if the number of the slide layer is less than *k*,
  - red, if the number of slide the layer is equal to *k*,
  - normal (black), if the number of slide layers is greater than *k*.
- The verbatim text and \secc macros canot be used inside \layer environment.
- See OpTEX documentation for more information.
- Next slide shows the usage of \pshow.

Example of \pshow usage

Ideas in special order

- First idea

```
\secc Ideas in special order

\layers 3
* {\pshow1 First idea}
* {\pshow3 Second idea}
* {\pshow2 Third idea}
\endlayers
\pg+

\secc A formula

\layers 4
Consider
$$
  E = {\pshow2 m}{\pshow3 c^2}
$$
\endlayers
That is great!
\pg;
```

Example of \pshow usage

Ideas in special order

- First idea
-
- Third idea

```
\secc Ideas in special order

\layers 3
* {\pshow1 First idea}
* {\pshow3 Second idea}
* {\pshow2 Third idea}
\endlayers
\pg+

\secc A formula

\layers 4
Consider
$$
  E = {\pshow2 m}{\pshow3 c^2}
$$
\endlayers
That is great!
\pg;
```

Example of \pshow usage

Ideas in special order

- First idea
- Second idea
- Third idea

```
\secc Ideas in special order

\layers 3
* {\pshow1 First idea}
* {\pshow3 Second idea}
* {\pshow2 Third idea}
\endlayers
\pg+

\secc A formula

\layers 4
Consider
$$
  E = {\pshow2 m}{\pshow3 c^2}
$$
\endlayers
That is great!
\pg;
```

Example of \pshow usage

Ideas in special order

- First idea
- Second idea
- Third idea

A formula

Consider

$$E =$$

That is great!

```
\secc Ideas in special order

\layers 3
* {\pshow1 First idea}
* {\pshow3 Second idea}
* {\pshow2 Third idea}
\endlayers
\pg+

\secc A formula

\layers 4
Consider
$$
  E = {\pshow2 m}{\pshow3 c^2}
$$
\endlayers
That is great!
\pg;
```

Example of \pshow usage

Ideas in special order

- First idea
- Second idea
- Third idea

A formula

Consider

$$E = m$$

That is great!

```
\secc Ideas in special order

\layers 3
* {\pshow1 First idea}
* {\pshow3 Second idea}
* {\pshow2 Third idea}
\endlayers
\pg+

\secc A formula

\layers 4
Consider
$$
  E = {\pshow2 m}{\pshow3 c^2}
$$
\endlayers
That is great!
\pg;
```

Example of \pshow usage

Ideas in special order

- First idea
- Second idea
- Third idea

A formula

Consider

$$E = mc^2$$

That is great!

```
\secc Ideas in special order

\layers 3
* {\pshow1 First idea}
* {\pshow3 Second idea}
* {\pshow2 Third idea}
\endlayers
\pg+

\secc A formula

\layers 4
Consider
$$
  E = {\pshow2 m}{\pshow3 c^2}
$$
\endlayers
That is great!
\pg;
```

Example of \pshow usage

Ideas in special order

- First idea
- Second idea
- Third idea

A formula

Consider

$$E = mc^2$$

That is great!

```
\secc Ideas in special order

\layers 3
* {\pshow1 First idea}
* {\pshow3 Second idea}
* {\pshow2 Third idea}
\endlayers
\pg+

\secc A formula

\layers 4
Consider
$$
  E = {\pshow2 m}{\pshow3 c^2}
$$
\endlayers
That is great!
\pg;
```

Tables, pictures

- Tables can be created by `\table` or `\ctable` macro.
- Pictures can be included by `\inspic` macro.
- See **CTUstyle** and OpTEX documentation for more details.
- The centering would be done by the `\centerline` macro.
- Example:

Tables, pictures

- Tables can be created by `\table` or `\ctable` macro.
- Pictures can be included by `\inspic` macro.
- See **CTUstyle** and OpTEX documentation for more details.
- The centering would be done by the `\centerline` macro.
- Example:

```
\centerline{\picw=5cm \inspic cmelak1.jpg }
```

Tables, pictures

- Tables can be created by `\table` or `\ctable` macro.
- Pictures can be included by `\inspic` macro.
- See **CTUstyle** and OpTEX documentation for more details.
- The centering would be done by the `\centerline` macro.
- Example:

```
\centerline{\picw=5cm \inspic cmelak1.jpg }
```

- You can use `\puttext` or `\putpic` macro for arbitrary positioning of texts or images.

Comparison CTUslides with Beamer*

The LaTeX package Beamer gives much more features and many themes are prepared for Beamer, **but**

* http://www.ctan.org/pkg/beamer

Comparison CTUslides with Beamer*

The LaTeX package Beamer gives much more features and many themes are prepared for Beamer, **but**

- the user of Beamer is forced to *program* his/her document using dozens of `\begin{foo}` and `\end{foo}` and many another programming constructions,
- on the other hand, plain TeX gives you a possibility to simply *write* your document with minimal markup. The result is more compact.

* http://www.ctan.org/pkg/beamer

Comparison CTUslides with Beamer*

The LaTeX package Beamer gives much more features and many themes are prepared for Beamer, **but**

- the user of Beamer is forced to *program* his/her document using dozens of `\begin{foo}` and `\end{foo}` and many another programming constructions,
- on the other hand, plain TeX gives you a possibility to simply *write* your document with minimal markup. The result is more compact.
- You need to read 250 pages of doc for understanding Beamer,
- on the other hand, you need to read only ten slides** and you are ready to use **CTUslides**.

* http://www.ctan.org/pkg/beamer

** this eleventh slide isn't counted

Comparison CTUslides with Beamer*

The LaTeX package Beamer gives much more features and many themes are prepared for Beamer, **but**

- the user of Beamer is forced to *program* his/her document using dozens of `\begin{foo}` and `\end{foo}` and many another programming constructions,
- on the other hand, plain TeX gives you a possibility to simply *write* your document with minimal markup. The result is more compact.
- You need to read 250 pages of doc for understanding Beamer,
- on the other hand, you need to read only ten slides** and you are ready to use **CTUslides**.
- A notice for programmers: to create another individual typographical design for LaTeX is much more complicated than to do the same in plain TeX. And you need to seriously understand plain TeX if you want to do something more complicated in LaTeX.

* http://www.ctan.org/pkg/beamer

** this eleventh slide isn't counted

Thanks for your attention

Thanks for your attention

Questions?