Writing a paper in LaTeX

collaborating, commenting, tracking changes

Aline Murawski

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Topics

1. Commenting
   - Todo lists
   - Custom comment style
2. Change tracking
   - Whole document
   - Single chapters
3. More useful stuff

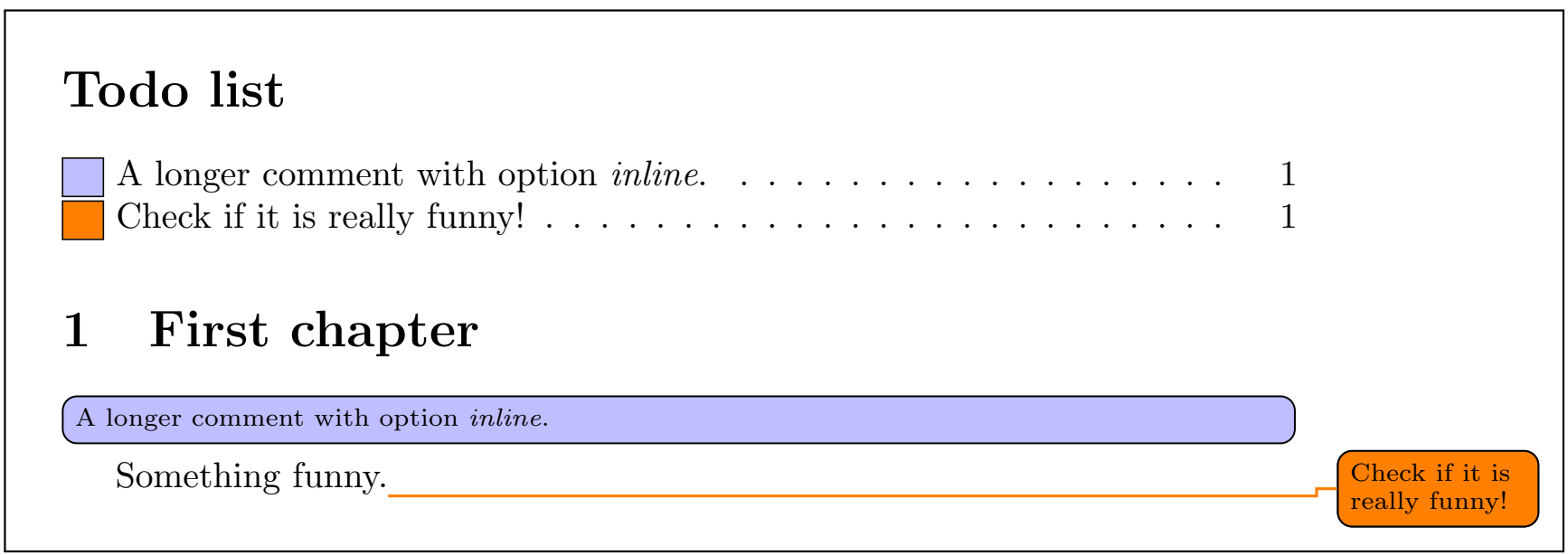
Todo list and custom comment style

Todonotes by Henrik Skov Midtiby

- `http://www.ctan.org/tex-archive/macros/latex/contrib/todonotes/`
- comment boxes in margin or text (inline)
- highly customizable e.g. for using different authors

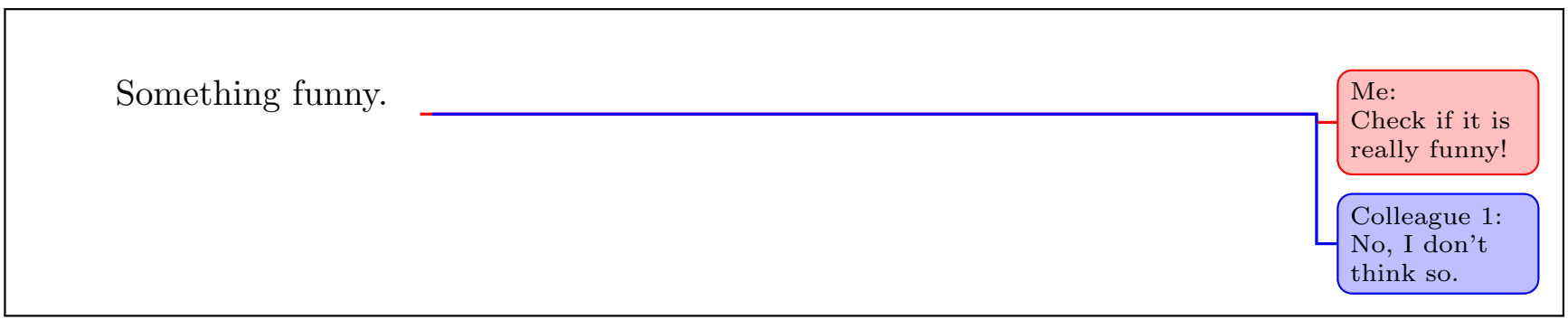
Todo lists

```
\documentclass[10pt,a4paper]{article}
\usepackage[latin1]{inputenc}
\usepackage[colorinlistoftodos, textsize=scriptsize, prependcaption]{todonotes}

\begin{document}

\listoftodos

\section{First chapter}

\todo[inline,backgroundcolor=blue!25]{A longer comment with option \emph{inline}.}
Something funny.
\todo{Check if it is really funny!}

\end{document}
```



Custom comment style

```
\documentclass[10pt,a4paper]{article}
\usepackage[latin1]{inputenc}
\usepackage{xargs}
\usepackage{xcolor}
\usepackage{tcolorbox}
\usepackage[colorinlistoftodos, textsize=scriptsize, prependcaption]{todonotes}

\newcommandx{\ME}[2][1=]{
\todo[linecolor=red,backgroundcolor=red!25,bordercolor=red,#1]{Me:\\#2}
}

\newcommandx{\CA}[2][1=]{
\todo[linecolor=blue,backgroundcolor=blue!25,bordercolor=blue,#1]{Colleague 1:\\#2}
}

\begin{document}

Something funny. \ME{Check if it is really funny!} \CA{No, I don't think so.}

\end{document}
```



Change tracking

Whole document

Fancy title of fancy research paper

Me, my colleague, my boss

version: September 13, 2016

Abstract

A short summary.

1 Introduction

Of course we need to cite our colleagues (Nied et al., 2014; Petrow and Merz, 2009) and everybody else we know (Vorogushyn and Merz, 2013) to have a nice long list of references.

2 Data

Figure 1: This penguin represents our data.

Here we describe the data. And we show some nice graph of them (Figure 1).

3 Methods

Table 1: Random table.

letter	run	number
A	1	23
B	3	98
C	54	56

For this fancy paper some fancy methods were used as well. In table Table 1 we just give some random info that nobody actually needs.

4 Results

I wrote some text here, but I'm not yet really sure about it. I'll put a note for my co-authors to have a look.

Me:
Is this correct? Check again!

Colleague 1:
I think this is a stupid sentence.

5 Discussion

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Me:
Here in the discussion I'm really not sure about certain things and I have to explain a lot in the comment. This would make the comment too long, so I use the option *inline*.

6 Conclusions

References

Nied, M., Pardowitz, T., Nissen, K., Ulbrich, U., Hundecha, Y., and Merz, B.: On the relationship between hydro-meteorological patterns and flood types, Journal of Hydrology, 519, 3249–3262, doi:10.1016/j.jhydrol.2014.09.089, URL http://dx.doi.org/10.1016/j.jhydrol.2014.09.089, 2014.

Petrow, T. and Merz, B.: Trends in flood magnitude, frequency and seasonality in Germany in the period 1951-2002, Journal of Hydrology, 371, 129–141, doi:10.1016/j.jhydrol.2009.03.024, URL http://dx.doi.org/10.1016/j.jhydrol.2009.03.024, 2009.

Vorogushyn, S. and Merz, B.: Flood trends along the Rhine: the role of river training, Hydrology and Earth System Sciences, 17, 3871–3884, doi:10.5194/hess-17-3871-2013, URL http://dx.doi.org/10.5194/hess-17-3871-2013, 2013.

Change tracking

Whole document

Fancy title of fancy research paper

Me, my colleague, my boss

version: September 13, 2016

Abstract

A ~~short~~ longer summary.

1 Introduction

Of course we need to cite our colleagues (Nied et al., 2014; Petrow and Merz, 2009) ~~and everybody else we know (Vorogushyn and Merz, 2013)~~ to have a nice long list of references.

2 Data

Figure 1: This penguin ~~represents our data~~is just cute.

Here we describe the data. And we show some nice graph of them (Figure 1).

3 Methods

Table 1: Random table.

letter	run	number
A	1	23
B	3	98
C	54	~~56~~24

For this fancy paper some fancy methods were used as well. In table Table 1 we just give some random info that nobody actually needs.

4 Results

I wrote some text here, but I'm not yet really sure about it. I'll put a note for my co-authors to have a look.

Me:
Is this correct? Check again!

Colleague 1:
I think this is a stupid sentence.

Me:
Ok, got to change it.

5 Discussion

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Me:
Here in the discussion I'm really not sure about certain things and I have to explain a lot in the comment. This would make the comment too long, so I use the option *inline*.

6 Conclusions

After submitting a first version of the paper I made some changes. These changes should be highlighted. Some journals (e.g. HESS) require that for submitting papers!

References

Nied, M., Pardowitz, T., Nissen, K., Ulbrich, U., Hundecha, Y., and Merz, B.: On the relationship between hydro-meteorological patterns and flood types, Journal of Hydrology, 519, 3249–3262, doi:10.1016/j.jhydrol.2014.09.089, URL http://dx.doi.org/10.1016/j.jhydrol.2014.09.089, 2014.

Petrow, T. and Merz, B.: Trends in flood magnitude, frequency and seasonality in Germany in the period 1951-2002, Journal of Hydrology, 371, 129–141, doi:10.1016/j.jhydrol.2009.03.024, URL http://dx.doi.org/10.1016/j.jhydrol.2009.03.024, 2009.

Vorogushyn, S. and Merz, B.: Flood trends along the Rhine: the role of river training, Hydrology and Earth System Sciences, 17, 3871–3884, doi:10.5194/hess-17-3871-2013, URL http://dx.doi.org/10.5194/hess-17-3871-2013, 2013.

Change tracking

Whole document

Latexdiff by Frederik Tilmann

- `http://www.ctan.org/tex-archive/support/latexdiff/`
- e.g. required by HESS
- can highlight differences in text, headings, captions, tables
- cannot highlight differences in comments (i.e. todonotes)
- gives complete reference list of new + old version

Change tracking

Whole document

how to use:

- `latexdiff OPTIONS old.tex new.tex > changes.tex`
- OPTION `--flatten` for including multiple tex-files
- OPTION `--type=UNDERLINE` for changes highlighted as shown (for more options, see latexdiff manual)
- `latexdiff-vc` – can handle version control, though not tested yet (see manual)

Change tracking

Whole document

Whole process
(latexdiff, compile document with changes and bibliography)
– i.e. as a `.bat`-file (Windows)

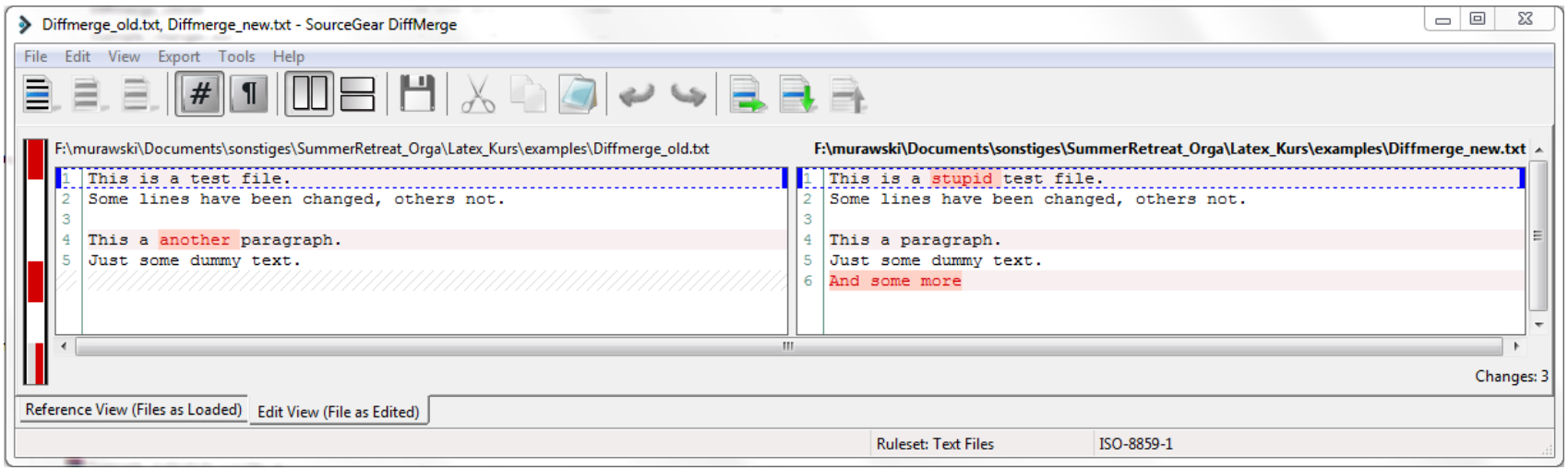
```
F:
cd directory\of\your\manuscript
latexdiff --flatten --type=UNDERLINE old.tex new.tex > changes.tex
pdflatex -quiet changes.tex
bibtex changes
pdflatex -quiet changes.tex
pdflatex -quiet changes.tex
```

Change tracking

Single chapters

DIFFMERGE

- `https://www.sourcegear.com/diffmerge/`
- might be included in SourceTree as `external diff`
- useful for merging changes of two different `.tex`-files



bibexport

- extract only used references from `.bib`-file
- `http://ctan.org/pkg/bibexport`
- useful for submitting manuscript to journal
- how to use:

```
bibexport.sh -o literature.bib manuscript_main.aux
```

latexpand

- replaces all `\input` and `\include` commands with the respective file content
- useful for “finalising” e.g. a manuscript to keep the published version and prevent it from further changes in the associated sub-files
- basically what option `--flatten` in latexdiff does internally
- included in MiKTeX and TeX Live
- how to use:

  ```
  latexpand manuscript_original.tex > manuscript_flattened.tex
  ```
- some useful extra options:

  ```
  --keep-comments --empty-comments
  ```
- `http://www.ctan.org/pkg/latexpand`

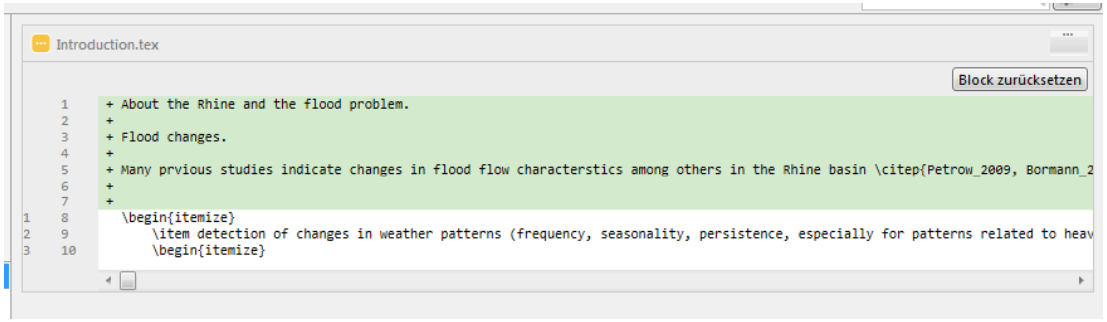
latex2rtf

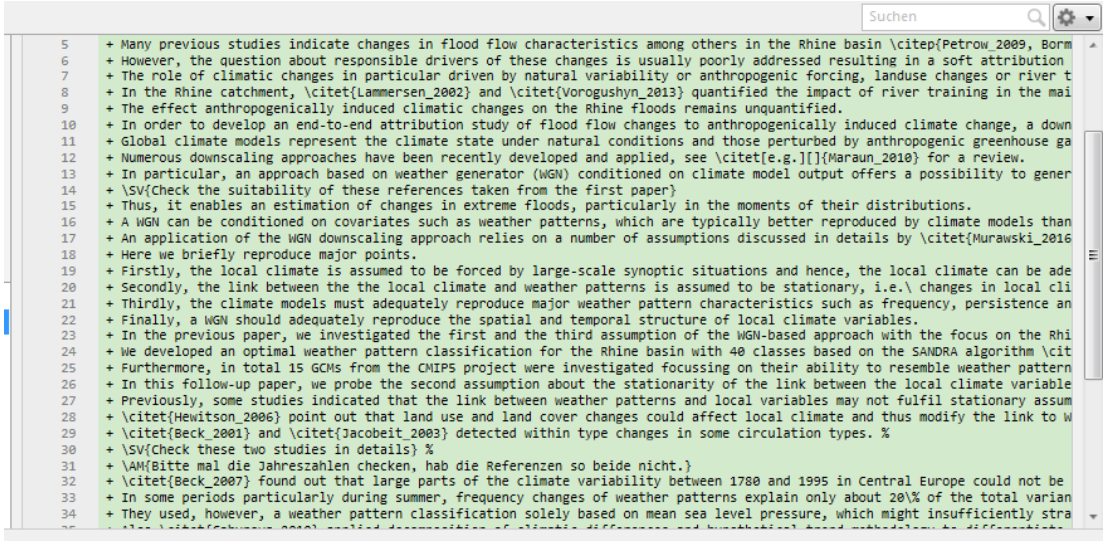
- convert latex file to rtf, which can be read by Word
- `http://latex2rtf.sourceforge.net/`

Some more hints

... for Diffmerge and SourceTree

Use one line per sentence:





Some more hints

pitfalls ...

... in latexdiff

- empty `.tex` file included won't compile
- no `input` commands allowed before `\begin{document}`
  $\rightarrow$ i.e. preambel not in extra file

... in todonotes

- no umlauts but rather `\"a, \"o, \"u, \ss{}`

Thanks for your attention and happy writing :)